THE LANCET.

LECTURES

ON THE

ANATOMY, PHYSIOLOGY, AND DISEASES OF THE EYE.

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Lecture XI.

Purulent Ophthalmia of Infants.

Gentlemen,

The first form of purulent ophthalmia to which I propose to call your attention, is that which occurs soon after birth. It is the *Purulent ophthalmia of newly-born infants*; *ophthalmia purulenta ricopatorum*; the "purulent eye" of children of Mr. Ware. I do not know that any other person has used the latter term, and I see no good reason why it should be adopted, as the proper tunics of the eye are not necessarily involved in the affection. This inflammation is one of considerable consequence, and the more so from its commencing in a way not calculated to excite the attention, or alarm the fears of the mother or nurse. The child cannot express its sensations, and the concomitant swelling conceals the progress of disease, so that serious mischief is frequently done before you see the patient. In the first place, the inflammation is not immediately noticed, and in the second, the measures employed are frequently insufficient to check its progress; hence it causes more blindness than any other inflammatory disorder that happens to the eye; and the number of children is very considerable, whose sight is partially or completely destroyed by it. We have them constantly brought to this infirmary with staphyloma, opacities of the cornea, and prolapsus of the iris; or with the tunics collapsed, and the very form of the eye destroyed. You can easily imagine how severe the inflammation must be to produce these consequences. The parents and attendants are apt to suppose, when this inflammation first appears, that it is merely a cold in the eye, which will go off, and the consequences which I have just mentioned take place, in many cases, before they are aware of the danger, and before they resort to surgical assistance.

The inflammation commonly comes on about *three days* after birth, but it may take place at a later period. In the first stage it is confined to the mucous lining of the palpebræ. It is observed that the lids stick together a little when the child wakes from sleep; you may see that their edges are redder than natural, and especially at the corners; the child experiences pain from the access of light, and therefore shuts the eye against it. If you invert the lids at this time, you will find their lining red and villous, and you will see a little white mucus lying on the inside of the lower lid. The globe is in a natural state. This may be called the first stage of the complaint.

In the second stage, all the symptoms are increased; the inflammation extends from the conjunctiva of the lids to that covering the globe; the vascular congestion and redness are much augmented; the lids swell and become red even externally; there is a copious secretion of purulent fluid from the inflamed membrane, which agglutinates the edges of the palpebræ, and then accumulates between the lids, or pours out over the face, staining the cap and linen. Exposure to light becomes very painful, and the child turns away its head and contracts its brow, keeping the eye constantly shut, even if the swelling of the lids should not close them.

The inflammation, the redness, and the tumefaction of the conjunctiva in the second stage of the complaint, are carried to the highest pitch; the whole of the conjunctiva, lining both the palpebræ and globe, is swollen, of an uniform bright scarlet colour. The surface at the same time assumes a villous character, resembling in the latter respect, and in its colour, the appearance of the internal surface of the fœtal stomach, after a success-

ful injection with size and vermilion. The close adhesion of the membrane to the tarsi, prevents the palpebral conjunctiva from swelling much; but the loose folds between the lid and the globe become greatly enlarged, forming red tumid rolls, finely granulated. These folds, pressed on by the orbicularis, evert the tarsi, causing ectropium of either or both lids. This eversion takes place when we attempt to examine the eye by separating the lids, or it will be produced even by the effect of crying. It is generally temporary, subsiding when the cause ceases to act; but it may be permanent.

There is general, and often very considerable tumefaction of the lids from serous effusion into their cellular texture; they become red externally, and in the cases of severest inflammation, the upper lid presents a smooth convexity of bright red colour. When thus swollen, the upper lid hangs completely over the lower. The redness and swelling are increased by crying, when the whole globe is pushed forwards.

A profuse discharge takes place from the eye, and pours over the face of the child in crying, or when we open the lids for examination. The lids are agglutinated by the drying of the discharge, and then become distended with the puriform secretion, which issues in a stream, to the amount of a tea-spoonful, on opening the eye. During the night the eyelids become so firmly stuck together, that they must be carefully moistened and soaked with warm water, or milk and water, to open them. When they are separated, the eye is completely concealed by the discharge; we wipe it away with a soft rag, and there is still enough to cover the globe and hide the cornea, and ultimately we find the latter frequently covered by a kind of coagulated layer, which must be removed by syringing. The discharge may be whitish, like the pus secreted by a healthy ulcer, and it then is generally small in quantity. More commonly it is yellow in various tints, and more copious; it is straw or lemon-coloured, or it stains linen yellow, like the yellowest gonorrhœal discharge. This yellow tint is very deep in the miserable unhealthy jaundiced children, sometimes being of a yellowish green. It may be thinner, and of a reddish colour, that is, ichorous or sanious. Sometimes there is an admixture of actual blood.

In this second stage, the inflammation has passed from the palpebral lining to the surface of the globe; the conjunctiva scleroticæ is found red, and it may be a little elevated by serous effusion. If the inflammation should continue, and not be checked by suitable treatment, it extends to the cornea, and thus may reach the interior of the globe. Some one or more of the following changes are now produced.

1. *Sloughing* of the cornea, general or *partial*. When this change is about to take place, the cornea is at first whitish and dusky, then loses its polish and firmness of texture, being converted into a dirty greyish or brownish slough, in which the loss of vitality is immediately obvious; a line of separation takes place at the margin, and the dead part is soon cast off. The entire cornea may thus perish and separate, when the iris protrudes through the aperture *en masse*, presenting an irregular, dirty brownish, prominence. Under such circumstances, the iris may either be nakedly exposed, and the humours escape, or it may be covered by a thin pellicle, by what is called the membrane of the aqueous humour. This, however, generally gives way, so as to lead ultimately to collapse of the globe. The separation of a partial slough leaves a whitish flocculent and ragged ulcer, which, unless its character be soon changed, speedily makes its way into the anterior chamber, and causes prolapsus iridis.

2. *Ulceration* may take place in the cornea, more or less considerable in extent or depth; it may affect nearly the whole surface, or it may penetrate the cornea, and lead to prolapsus iridis. The latter part may adhere to the ulcerated aperture, and the ulcerative process stop, or it may go on, and extend to the interior of the globe.

3. *Opacity* of the cornea from interstitial deposition, either into the texture of the corneal conjunctiva, causing a thin external bluish grey film, or into the corneal laminæ, producing dense total opacity. These changes may be confined to a small portion, or may affect the entire cornea.

4. *Adhesion* of the iris to the inflamed or ulcerated cornea. Such are the principal, more or less serious, visible alterations in the cornea, anterior chamber, and iris, which take place when severe purulent ophthalmia extends from the mucous membrane in which it commences, to the globe; the last of these, however, although it occurs at this period, is not discoverable till afterwards, being concealed by the almost invariably concomitant opaque state of the cornea. These several diseased processes occur very quickly, and go on rapidly, as we might expect, *a priori*, from the great activity of the capillary circulation in infants, and the very acute character of the inflammation.

Examination of the eye is difficult from the swollen state of the lids and the smallness of the palpebral aperture; but it is important, particularly in the first instance, that we ascertain the exact state of the organ, the seat and extent of the mischief, and be able to form our prognosis. The painful impression of light causes the infant to resist any attempt at exposing the cornea, and the ectropium immediately produced by the forcible action of the orbicularis completely obstructs our view. The best and easiest mode of examining the eye of an infant is to open the lids while it is asleep; if the attempt be made lightly and gently, you may generally succeed in obtaining a clear view of the cornea without awaking the patient. If awake, watch your opportunity, when it is quiet, and separate the lids quickly before the muscles can resist. If the child be crying when you attempt to examine the eye, it is scarcely possible to obtain a view of the cornea, on account of the violent contraction of the orbicularis, and the force uselessly employed in attempting to do so cannot but be injurious. In attempting to open the lids, if you raise the upper by the skin merely, the action of the orbicularis will produce an eversion of the tarsus and hinder you from seeing the cornea; but if you push the tarsus itself upwards and backwards the accident will be prevented. I should observe, that if you should produce eversion of the lid it may be easily restored to its natural situation by drawing the tarsus gently downwards.

In the third stage of the complaint, there is a gradual abatement and cessation of all the symptoms; the redness, swelling, and discharge are diminished; the child opens the eyes more readily to the light, and, when the increased discharge is removed, it opens them spontaneously in the evening, or in a dull light. No ectropium takes place on crying, or when the eye is examined. You now see clearly the changes that have occurred under the active inflammation, and you have the opportunity of tracing the progress of these towards recovery. When the entire cornea has sloughed, and the humours have been evacuated, the tunics collapse, and the globe shrinks to one-third of its original size, appearing as an opaque, somewhat flattened, tubercle. If the humours have not escaped, the projecting iris recedes again, and becomes covered by an opaque pellicle, the front of the eye being flattened. In the case of large sloughing, or extensive ulceration, the iris falls against the cornea, becomes adherent to it, and partial or general staphyloma ultimately ensues. If prolapsus iridis has taken place through the opening caused by partial sloughing or ulceration, the brownish tumour gradually subsides, and at last disappears; you then see a small dark point in the cornea, surrounded with a white circle, which is the cicatrix of the corneal ulceration. The iris adheres firmly to the external surface of the cornea at this part, and there is usually change of figure, with more or less contraction of the pupil. According to the situation and extent of these changes, vision may be either impaired, lost, or injured.

The ulcers of the cornea, while spreading, are of a dusky white, or yellowish colour, irregular in their surface, and often with a ragged edge; when they begin to heal, they have a greyish or bluish aspect, become smoother, have a soft gelatinous appearance from deposition of the substance which is to repair the breach, and red vessels pass to them from the conjunctiva, through the intervening transparent portion of cornea.—They heal, leaving a permanent opaque cicatrix; and this opacity will be of more or less importance as it is situated in front of the pupil, or at a distance from it.

Interstitial deposition into the texture of the cornea leaves permanent opacity of various extent and density. When it is dense, (*leucoma, albugo,*) and when consequently the cornea has been inflamed throughout, the inflammation will readily pass to the iris: that two inflamed parts brought into contact should adhere might be expected. This preternatural connexion is technically called synechia anterior. No doubt in these cases the surfaces containing the aqueous humour are generally inflamed, and then it is not uncommon to find a central opaque spot on the capsule of the lens, with the leucoma and synechia anterior: such an opacity may, however, be produced without the two other changes.

In milder cases none of these consequences are produced; the tumefaction of the conjunctiva gradually subsides; the discharge is lessened, but in a whitish form it continues for some length of time, and the conjunctiva slowly returns to its healthy state.

When the complaint is severe, the infants suffer constitutionally; they become restless and debilitated; the tongue is white and the bowels are irregular in the active stage. They become pale and feeble when sloughing has occurred.

Both eyes are usually affected, but it does not commence in both at the same time: there is generally an interval of a few days.

Causes of the purulent Ophthalmia of Infants.

In a great proportion of cases there is vaginal discharge from the mother, leucorrhœa, and sometimes gonorrhœa. The eyes of the infant are exposed to the contact of such morbid secretions in passing through the vagina; hence has arisen the natural inference that they are affected from the actual contact of this matter, and the tolerably regular appearance of the disease on the third day corroborates this notion of contagious origin from direct application of the morbid matter. (Mr. Lawrence detailed the particulars of a case, in which a married gentleman contracted gonorrhœa, and communicated the disease to his wife then pregnant. The infant, which he did not see till four months after birth, had been affected with purulent ophthalmia; one of its eyes was staphylomatous, and the cornea of the other was considerably nebulous. The affection had been totally neglected, even the attendant accoucheur having stated that it was merely a cold in the eye, which would do well of itself.) I have seen some cases of very rapidly destructive purulent ophthalmia in infants, when the mother has had gonorrhœa at the time of parturition. Sloughing of the cornea, with extensive ulceration spreading to the interior, and consequent evacuation of the globe, had occurred in these instances before I have seen them. But, on the other hand, purulent ophthalmia is often seen in the children of healthy mothers, at least of such as appear perfectly healthy, and deny, when questioned, the existence of vaginal discharge in any shape. As we cannot carry the investigation further, the origin of the complaint must remain at least doubtful in such cases, and consequently the contagious nature of the disorder is still open to dispute.

However we may settle the question of contagion, considered as the direct or exciting cause of purulent ophthalmia in infants, numerous facts show that certain circumstances have a great influence in favouring its occurrence; so that, if the application of matter secreted in the vagina immediately excite the disorder in some, there are others in whom we can only trace the influence of ordinary causes, and we are thus led to conclude that the same kind of agencies which produce other inflammations may also excite this particular form. All the influences which depress the system, are generally favourable to the appearance of purulent ophthalmia. It is most frequent and destructive in weakly children, in those who are most exposed to the various debilitating causes of bad air, cold, insufficient clothing, and deficient nutriment. Purulent ophthalmia is more frequent in premature children, than in those born at full time; in twins than in single children. It is much more common among newly born infants than in children; in children than in adults; it thus appears that as the powers of the system become more fully developed, the susceptibility to this complaint is lessened. It is more frequent in damp and cold, than in dry and warm weather, and among the children of the poor and necessitous than in those of the higher classes. It is particularly prevalent, unmanageable, and destructive or injurious to the organ, in foundling hospitals, where infants are collected in great numbers, and deprived of what seems essential to their existence, the incessant care and watchfulness of the mother. I do not speak of such institutions as the foundling hospital of London, which does not receive infants; but of the foundling hospitals of Paris, Petersburgh, Moscow, and Vienna, which receive all the infants that are presented. The mortality in these establishments is enormous; the infants suffer from various diseases, and among them from purulent ophthalmia. It is of essential consequence to the well-being of the child at this tender age, that it should receive that constant attention and affectionate care, which a mother only can supply; although the institutions in question are admirably conducted, they can never make up for this deficiency. Langenbeck observes that in the lying-in hospital of Vienna, where the women admitted are of the lowest class, and almost universally labouring under gonorrhœa or other vaginal discharge, but where the infants remain with their mothers, purulent ophthalmia is not common; while in the foundling hospital, where the children have not the advantage of maternal care, the affection is very frequent.

Prognosis. There is a singular contrast between the violence of this inflammation of the eyes in newly born children, and the serious consequences to which that inflammation so rapidly leads, and the readiness with which it yields to suitable treatment; therefore if you see a case of purulent ophthalmia before any injury is done to the cornea, you may assure the parents, and it gives you great pleasure to be able to do so, that sight will not suffer. If the inflammation be confined to the palpebræ or even if it has extended to the globe, provided the cornea remains clear, it cannot be

considered as attended with risk; for by the adoption of suitable treatment all injurious consequences to the organ will be averted; even the most violent form is very manageable, and will do well under proper treatment. But if you find the disease so far advanced that the cornea has sloughed, or extensively ulcerated, loss of sight is unavoidable. Even if the cornea be of a dull white, or has begun to lose its transparency, injury or loss of vision is very probable; it is most likely that ulceration or prolapsus of the iris, or permanent opacity will follow. General superficial opacity from thickening of the corneal conjunctiva will disappear.

Some kind of prognosis may be drawn from the discharge; the whiter and the smaller in quantity, the lower is the degree of inflammation. The yellower and more copious the discharge, the more active is the disorder. If it should be thin, ichorous, or sanious, we conclude that sloughing has occurred, and that spreading and destructive ulceration is going on. The admixture of blood shows a violent degree of action in the part, but is not in itself dangerous, although it alarms the female attendants. It often relieves the overloaded vessels of the conjunctiva, and is thus attended with benefit to the organ.

Treatment of the purulent ophthalmia in infants. In the most acute form of purulent ophthalmia, when the conjunctiva of the globe is of a general bright red, and swollen, more especially when the cornea has begun to look hazy; or if the palpebræ are much swollen and of a bright red colour, though we may not be able to see the eye itself, it will be necessary to take blood from the part by leeches; and the lids are sometimes swollen so much, as to preclude actual inspection of the globe. The superior palpebra is the best situation for the application; and a leech or two may be placed in the middle of the red swelling which it forms. From the vascularity of the skin leech-bites bleed very freely in these young subjects; a single leech thus applied will almost invariably remove the redness and swelling of the lid, and this favourable external change is attended with corresponding diminution of the conjunctival inflammation. I have seldom seen it necessary to use more than one leech, and even this sometimes renders the infant quite pale; in the most robust children I should not advise more than two, one to each lid, or one to the upper lid of each eye.

If the state of the cornea should be doubtful, with congestion still active in the conjunctiva, although the palpebræ should not be much swollen, it is better to apply the leech. On the occasions I have described you may use externally a saturnine lotion made with rose water. The bowels should be opened, and kept open by castor oil or magnesia; when the inflammation is active, with a white state of the tongue, you should give a grain or two of calomel previous to the administration of the purgative. The use of blisters has been recommended; but I am very cautious about employing them in infants and children; unless therefore, such counter-irritation is absolutely necessary, I consider it better to be avoided. A physician of the lying-in hospital of Vienna recommends the constant application of cloths dipped in cold water, and uses no other means, external or internal. Knowing the violent nature of the inflammation, and the serious injury it is capable of producing, I should not feel contented to rely upon such a plan.

We must prevent the agglutination of the lids, and favour the ready escape of the discharge, by frequently bathing with tepid water or milk, and using a little lard or fresh butter; we do this, not because the discharge posesses the power which Mr. Ware supposed it to have, of corroding or ulcerating the cornea; but in order to prevent irritation from distention of the lids, when glued together, and to obviate excoriation of them on the surrounding parts.

Having diminished the violence of the inflammaton by the antiphlogistic means just described, you immediately proceed to employ astringents; I may observe, however, that the use of such applications is both safer and more advantageous in this form of ophthalmic inflammation than any other. We generally use a simple solution of alum, in the proportion of two grains sometimes, generally of four grains, which may be gradually increased to ten grains, to the ounce of water. This solution is to be carefully injected between the palpebræ, so as to cleanse out all the purulent secretion, three or four times in the twenty-four hours; afterwards a soft rag dipped in the same fluid, may be laid over the eye for a short time; with the continued employment of this astringent solution, an occasional dose of some mild aperient may be combined; and usually nothing more is required. The swelling and redness of the membrane are lessened, the discharge abates, and the organ recovers its natural appearance, some congestion and thickening of the palpebral conjunctiva, and some increased mucous secretion often continuing for a considerable time. In a great proportion of cases, and in all those

where the conjunctiva oculi does not yet participate in the inflammation, the astringent may be employed at once: we adopt this course in 49 cases out of 50 at our Infirmary, using no other means than magnesia internally, and the solution of alum locally; and out of many hundred instances, I hardly recollect one where the eye has suffered in any respect, if the cornea was clear when the infant was first seen. If you have occasion to change the lotion, from the eye being accustomed to the stimulus of the alum, you may advantageously resort to the nitrate of silver, beginning with one or two grains to the ounce, and gradually increasing the strength to four or six grains. This solution may be dropped between the lids two or three times a day.

Mr. Ware, whom I should have mentioned, by the bye, as having given the first express description of this complaint in our own, or I believe in any language, particularly recommends an astringent solution of rather complicated preparation and composition, called Bates's camphorated water. You may make it by pouring eight ounces of boiling water on eight grains of the sulphate of copper, the same quantity of Armenian bole, and two grains of camphor; let it stand till cold, and then pour off the clear liquor for a lotion. This composition has no superiority over the solution of sulphate of copper or alum; indeed I consider the latter the best astringent, and a solution of it in rose water is the pleasantest form of the remedy.

When the cornea has sloughed, the violence of the inflammation abates, being succeeded by an unhealthy and destructive ulcerative process, which, if unchecked, soon penetrates the cornea, and exposes the interior of the organ. The separation of the slough leaves a white flocculent ragged ulcer, in which there is no disposition to reparation. The constitutional symptoms undergo a corresponding change, the infant becoming pale, restless, irritable and weak. Under these circumstances the powers of the system must be supported by tonics, of which bark is the best. The most convenient form of administering the remedy, is that of extract, which the infant will take easily, when broken down and blended with milk: from 4 to 10 grains may be given in this way every 4 or 6 hours. It speedily renovates the powers of the system, and produces an equally beneficial local influence. The solution of alum may be used to the eye.

The foregoing observations, although directly referring to the purulent ophthalmia of newly-born children, are applicable to the treatment of the affection in those of one, two, or three years old, except that depletion must be more active. When the eye is bright red and painful, so as to prevent rest, 2, 3, or 4 leeches should be applied; one application is usually sufficient. Cold lotions are to be used; and purgatives of calomel with rhubarb or jalap, or followed by castor-oil. In older subjects, up to the time of puberty, leeches suffice, as a means of depletion; they may be employed more freely in proportion as the patient is older, and should be quickly repeated if the symptoms are not checked. Active treatment by leeches, purgatives and blisters cuts short the inflammation, and astringents finish the cure. I have, in a few instances of acute local congestion in a full habit, deemed cupping or venesection necessary before puberty.

LECTURES

ON THE

THEORY AND PRACTICE OF PHYSIC,

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LECTURE XIII.

Gentlemen,

AT my last Lecture I was speaking of the various qualities of the pulse, as observed in diseases; and I mentioned particularly, frequency and slowness, quickness and sluggishness, and likewise fulness; the other qualities, I shall now proceed to consider.

Smallness of Pulse is the reverse of fulness; it shows that a small quantity, only, of blood is contained in the artery under examination. This may arise either from diminished impulse of the heart and arteries behind, by which the blood is urged onwards with less force, or in less quantity than usual; or from an increase of the *tonic* contraction of the artery itself. Thus a small pulse may proceed from general weakness of system, (in consequence of which, the *propulsive* action will be diminished); and also from a deficient quantity of blood in the vessels: as after large hæmorrhages, or a deficient supply

of nutriment. But on the other hand, smallness of pulse is quite consistent with great strength of system, and abundance of the circulating fluid: for it may be occasioned by an increased *tonic* contraction of the vessel merely. Now it is of the utmost moment, that you should know how to distinguish between these in practice: as in the one case, bloodletting is scarcely admissible, or at least, requires great caution in its administration; while in the other, it may be employed with great freedom, if the disease be of a nature to call for such a remedy.

Smallness of pulse, arising either from general weakness, or from inanition, may be ascertained by inquiry into the previous circumstances of the patient, and by the soft relaxed state of the solids altogether. When it arises from such causes, it will necessarily be permanent; with the exception, that a powerful internal stimulus, or the application of the hot bath, may give rise to an external determination of blood, which will produce, while it lasts, a fulness of pulse; but this effect will be of very short duration, and will probably be followed by a still greater degree of smallness and feebleness of pulse, and perhaps by syncope.

On the other hand, smallness of pulse occasioned by contraction of the artery merely, will be accompanied by general marks of strength of system at the time, or immediately previous; and also by firmness of the solids when grasped. This state of pulse, too, will commonly be attended with a sense of oppression about the heart and lungs, or in the brain, the result of over-fulness of vessels in these parts.

This contracted state of the artery at the wrist is exceedingly common at the commencement of inflammation, and is relieved by bloodletting, which renders the pulse fuller, or, as it is commonly expressed, makes the pulse *rise:* that is, the bloodletting lessens the *tonic* contraction.

In long protracted diseases, such as fevers, and also in chronic affections of various kinds, we judge by the fulness of the pulse, (that is, by the size of the artery,) the progress the disease is making towards a fatal termination. Here the change is gradual. In acute inflammation, also, we determine chiefly by this test, (fulness of pulse) the extent to which bloodletting can be safely carried. We must never forget here, the effect of posture upon the fulness, as well as the frequency of the pulse. The pulse is generally rendered smaller, and at the same time more frequent, by the erect posture, and the difference is so striking, that frequently you cannot form a correct opinion of the disease while the patient is in the erect posture, even sitting; but especially if he has recently risen.

The 4th quality of pulse which you should notice, is its *strength*, and, the opposite to this, *weakness*. These are of considerable importance, in relation to disease.

Strength of pulse is measured by the force necessary to compress the sides of the artery together, so as to stop the current of blood through it. It is determined by the force with which the heart and arteries conjointly, are acting. A *strong* pulse is not always a *full* one; for *fulness* depends upon a disposition to dilate, in the artery under examination: while *strength* of pulse is occasioned by the force of the current of blood behind, endeavouring to force open the vessel; and which force is derived from the joint action of the heart and arteries, as just mentioned.

Strength of pulse in disease, does not always, (as in health is commonly the case) indicate general strength of system; because it may be the effect of a temporary excitement of the heart and arteries. But such a state of pulse, if permanent, is a proof of general strength; and will bear loss of blood, if called for by the symptoms.

On the other hand, *weakness of pulse*, which is judged of by the small force required to stop it, is always a sign of a weak system, and demands caution in the use of bloodletting, as well as other debilitating means. Smallness and weakness of pulse combined, argue the highest degree of general debility, and which will scarcely admit of loss of blood. The pulse at the wrist may be greatly weakened, and even annihilated, by paralysis, as in hemiplegia (for examples of which, I may refer you to several cases related by Dr. Storer in the third volume of the Transactions of a Society for promoting Medical and Surgical Knowledge). So that in order to judge correctly of the general state of the circulation in such cases, we must examine the pulse on both sides of the body, in the sound as well as in the paralytic limb.

5th. *Hardness* and *softness* of pulse, are also important qualities, in relation to disease. *Hardness* is denoted by a rigid, cord-like, feel of the artery, and which gives to the mind, on touching it, the sensation of a solid body pulsating under the finger, rather than a vessel containing a fluid in motion.

Hardness of pulse appears to depend upon a rigid, contracted state of the mus-

cular fibres of the artery. A hard pulse is necessarily a small one; for the *tonic* contraction exists in a high degree in this case; and it is generally a quick one also. This state of pulse is induced by long continued inflammation, especially of membranous structures.

A preternatural degree of *softness* of pulse, is the result of a peculiar condition of the arterial coats, the reverse of the former. It is commonly accompanied with softness or flabbiness of the solids in general. It attends inflammation of the medullary substance of the brain; and is, therefore, constantly observed in simple fever. But in membranous inflammation of the brain, as well as other membranous structures, the pulse is commonly hard. Inflammation of the substance of the lungs also, occasions softness of pulse.

6th. *Irregularity* of *pulse* is very various. The pulse may be irregular, either in regard to *force* or *frequency*. Thus, one beat may be stronger than another; whereas in health, the beats are all equal in respect to force; or the pulsations may follow one another at different intervals; and sometimes there is the loss of a stroke altogether, constituting what is called the *intermitting* pulse. On some occasions, the intermission occurs every third or fourth stroke; at others, not till after twenty or thirty.

Irregularity of pulse is derived from irregularity in the action of the heart. This irregularity in the action of the heart may depend upon organic, or other primary disease, in the heart itself; or it may be produced by disease in the brain, disturbing the regular supply of nervous power to the heart. The distinction is to be drawn from the attending symptoms. Thus if the irregularity arises from the heart primarily, there will be pain or some kind of uneasiness felt in the region of the heart, and generally other marks of thoracic disease: while, if it proceed from a brain affection, other signs of this will generally be found on examination. Hydrocephalus (or rather the cerebral inflammation which leads to it) in children, and fever in adults, are frequently attended with irregularity of pulse.

Distention of the stomach by flatus, sometimes seems to induce irregularity of pulse, which disappears when the flatus is expelled. How this operates, it is difficult to say.

Irregularity of pulse, it is proper to observe, is often induced by *narcotics* of all kinds, as opium: but more especially by the digitalis. When you meet, therefore, with such a state of pulse, you ought always to inquire, whether it may not have been induced by such a cause.

The heart and arteries do not always correspond, as to regularity. For example, palpitation of heart is not always productive of irregular pulse: and this shows the influence of the arteries on the motion of the blood.

A Redoubling of the Pulse (*pulsus dicrotus*) is sometimes observed; that is, a second stroke, (generally a weaker one), follows immediately the former; after which, there is a longer interval. It seems as if the heart were unable to empty itself by a single contraction, which is, therefore, renewed; as takes place in an enlarged and weakened state of the ventricle. Or it may, perhaps, arise from some impediment existing to the passage of the blood into the aorta; as from contraction or stricture at this part; or from a diseased state of the valves; or ossification of the aorta. Diseased lungs, by creating an obstacle to the passage of the blood from the right ventricle, may likewise disturb the regular action of the whole heart.

There is an irregularity of pulse that has been little noticed; which is, a *tremulous, vibratory* stroke, and which gives the idea of a fluid moving under the finger, which a healthy pulse does not. Such a pulse is generally observed in strongly marked simple fever, and appears to be occasioned by the want of a simultaneous action of the individual fibres of the muscular coat of the artery, which in health, act at the same instant, so as to produce a distinctness of stroke. Such a state of the pulse may be compared with the tremors of the muscles, that take place in such fevers, in their advanced stage; and probably is owing to the same remote cause, namely, the disordered condition of the brain; occasioning an irregular supply of nervous influence to the system at large.

Many other conditions of pulse have been noticed by writers, and said to indicate certain approaching changes in the system; as that of hæmorrhage; the approach of crisis in acute diseases, &c., but they are little to be relied upon, according to modern observation.

In judging of the qualities of the pulse, it is necessary to be aware of several circumstances which influence it, and unless attended to, may mislead our judgment. I shall enumerate the principal of these:

1. *Obesity.* In fat subjects, the pulse is so deeply buried, that it is difficult to obtain an accurate knowledge of it. The pulse in such, is apt to appear weaker and smaller than it really is. In corpu-

lent persons, therefore, we should make a more minute and attentive examination of this, to prevent our falling into error: the artery should be strongly pressed upon with two or three fingers, in order to judge of its size, and the real strength of the beats.

2. *Emaciation.* In thin and emaciated subjects, we can more easily examine the state of the pulse than in fat ones. In the former, we can, as it were, get round the vessel, and examine it thoroughly. In corpulent persons this cannot be done.

3. In *old age* not only is the artery thinly covered as just observed, but the pulse is hard from another cause. The solids altogether become more rigid as life advances, and this gives a degree of hardness and apparent strength to the pulse, which are very fallacious, and might easily mislead us by making us suppose the disease to be of a more active character than it really is, and to use bloodletting with too great freedom, and which might prove injurious to the patient.

4. *Idiosyncrasy.* Individuals differ greatly, both in respect to the size and strength of the pulse; and this arises from an original difference in the vascular system. In some, the bloodvessels are comparatively small, and in such the pulse will of course be small also. This can only be known by a previous knowledge of the individual; or, as it is vulgarly termed, "knowing the constitution." This kind of knowledge, is advantageous in several respects. In some persons, the pulse is intermittent, even in health. Now in general an intermittent state of pulse indicates danger, and is consequently calculated to produce alarm; but in those individuals in whom the pulse naturally intermits, intermission is of no moment. I have seen the pulse in some persons intermittent in health, but regular in disease; and in such, when health returned, the pulse again became intermittent.

5. *Unusual distribution of the radial artery*, is another source of error to be guarded against; and this may take place either in one or both arms. Thus, instead of the principal artery pursuing its usual course, a division of it takes place above, and a very small branch only, will be found in the usual situation. In some instances, none at all will be found there. In these cases, if the pulse were examined hastily, we might suppose, that the patient was in a state of extreme weakness, such as to prohibit altogether the loss of blood. I have myself been more than once deceived in this way. I remember a striking instance of this. It was a case of pneumonia, in which the pulse at the wrist was hardly perceptible; this deterred the practitioner from bleeding, although the patient was suffering great pain in the chest, with so much difficulty of breathing, as to seem to call for bloodletting to a great extent. The patient was young and vigorous, and, immediately before the attack was in good general health. The expression of his countenance did not at all indicate general debility. These circumstances gave rise to a suspicion of preternatural conformation of the artery; and upon a more minute examination, this was found to be the case. The principal artery was discovered taking an unusual direction. The arteries of the other parts of the body, were found beating strongly. I need not add, that we had no longer any fear of taking away blood.

6. *Tumours pressing upon the artery.* You will easily comprehend the effect of this, in diminishing the size and fulness of the pulse.

7. *Mental emotion* has a considerable influence on the pulse; fear and terror oftentimes produce great quickness and irregularity of the pulse. The mere sight of the medical practitioner will, in those termed irritable subjects, occasion much disturbance of the pulse. Those unaccustomed to the visits of a medical practitioner, are very apt to be affected in this way; and if we draw our opinion from an immediate examination of the pulse, we shall most probably come to a wrong conclusion. In such cases it is necessary to wait a few minutes, and repeat our examination once or twice, in order to avoid falling into error.

8. *Sudden change of posture*, will often greatly increase the frequency of the pulse, and which will last for several minutes. In an erect posture, the pulse will often be 5 or 10 strokes more than in a recumbent one. Any kind of bodily exertion may produce the same effect.

The pulse of the arm which is most used, is frequently larger and stronger than in the opposite side. Now as most persons are right-handed, it follows that in general, the pulse of the right arm will be found stronger and larger than that of the left. In left-handed persons, the reverse is observed.

10. The *temperature of the skin* also, will have a great influence over the pulse, by increasing or diminishing the *tonic* contraction of the artery.

Thus, you see, that the examination of the pulse is not so trivial a thing, as you might at first suppose; a number of circumstances require to be taken into consideration.

Of the Indications afforded by the Pulse, in regard to the Diagnosis, Prognosis, and Treatment of Diseases.

Great *frequency* of pulse generally indicates a febrile state of system, or *pyrexia*; and as this again is always the result of inflammation, a frequent pulse, so far, serves to show the existence of inflammation. If attended with heat of skin, and furred tongue, it may be implicitly relied upon.

Preternatural *slowness* generally indicates an oppressed state of brain, whether produced, as it may be, by inflammation in that organ, or any other cause. The pulse may become preternaturally slow, even in the early stage of cerebral inflammation; but more commonly it is in the advanced stage of the disease that this takes place; and sometimes it is only observed after the inflammation has apparently ceased: effusion (the consequence of the inflammation) only, remaining. It is of importance, in regard to the treatment, to determine whether the slowness of pulse proceeds from the one cause or the other, or from both combined. This is to be learned from the attending symptoms, as the state of the tongue, skin, &c., which generally shows the presence of inflammation.

Quickness of pulse is also generally a sign of existing inflammation. *Sluggishness*, the reverse.

Fulness shows the determination of the blood to the particular part; as *smallness* does the contrary. But the *smallness* may arise also from general weakness of system, or from inanition.

Strength and *weakness* indicate corresponding states of system, with the exception which I mentioned to you.

Hardness is a sign of long continued inflammation; as in *hectic fever*. Where the pulse is hard, it will generally be found that the crassamentum of the blood is buffed and cupped. *Softness* of pulse is indicative of a relaxed state of solids, and is generally combined with weakness of system.

Irregularity of pulse commonly excites alarm, and, in most cases, with reason; for it most frequently arises from organic diseases, either of the heart or brain, and which seldom admit of cure. If occasioned by *narcotics*, it is of little moment; and the same if constitutional.

The most useful indications derived from the pulse, are in regard to the use of bloodletting in inflammatory diseases.

A *full, strong*, and *moderately frequent* pulse, generally speaking, admits of bloodletting to the greatest extent, and without hesitation. Yet there are exceptions, as in acute rheumatism. In apoplexy also, the pulse will often continue full and strong and bounding; yet bloodletting is not always useful in such cases.

Extreme frequency of the pulse is rather adverse to bloodletting, and calls for narcotics, as opium and digitalis. *Preternatural slowness*, on the contrary, generally calls for bloodletting; unless it should arise from effusion in the brain simply, without existing inflammation.

Quickness (as distinguished from frequency) often calls for bloodletting; but does not in general require it to any considerable amount; because such a state of pulse mostly occurs in diseases that have been of long standing, and which are probably incurable. This state of pulse is generally relieved by the digitalis, and by opium, especially where bloodletting is premised. *Softness* of pulse generally admits of the use of *tonics*; *hardness* the reverse. The digitalis is very powerful in taking off hardness of pulse.

Weakness of pulse, when it exists in a moderate degree only, is not prohibitory of bloodletting, if the nature and magnitude of the disease seem to call for it. Caution and moderation as to quantity, are, however, required in such cases. *Weakness* combined with *smallness* and *softness* of pulse, are altogether adverse to this evacuation.

Irregularity of *pulse*, in itself, is hardly a guide, in regard to bloodletting; but must be taken in conjunction with other circumstances.

A regular and natural state of the pulse is no reason why bloodletting should not be employed, supposing the case to be of such a nature as to require it; as inflammation in important organs; which may call for bloodletting, although the general system, and therefore the pulse, may not as yet be disturbed by it. I may instance here, a case, in which there was abdominal pain and tenderness, indicating inflammation; yet the practitioner would not bleed, because the pulse was not disturbed. The disease increased, and five or six bleedings became necessary, where, perhaps, a single one might have sufficed.

I have now, gentlemen, enumerated the principal qualities of the pulse, both in health and disease, and the inferences which we draw from its different states.

This brings us to the subject of inflammation; the doctrine of which involves that of almost all other diseases. It is a subject of great extent; and if we consider it either in regard to the frequency of the disease, the suffering it occasions, or the danger that attends it, we shall find it well deserving of our closest attention. The next and several of the following lectures will, therefore, be devoted to this most important subject.

REVIEW.

The Science of Surgery, or the Principles of Pathology made the basis of Medical and Surgical Practice. By W. W. Sleigh, Esq., Lecturer on Anatomy, Physiology, and Surgery. 8vo. pp. 316. London, 1825. Anderson. Vol. I.

The author informs us, that the present work constitutes "the substance of his annual course of surgical lectures," and that it is published "with the desire of placing the healing art upon sound, scientific principles—of divesting it of empiricism, and of facilitating the acquirement and advancement of *medical* knowledge." He divides surgery into "art" and "science," the former comprehending whatever is mechanical "or actually done by the hand," and the latter, "a variety of affections which become so mingled and interwoven with medical ones, that it puts human ingenuity at defiance to separate them." He hopes "to enable the practitioner to act upon physiological and pathological principles; to unshackle him from the dogmas of others; and to teach him to build his practice upon the laws of nature alone." How far he has accomplished these desirable objects will appear as we proceed.

After condemning nosological works, and those of Cullen and Thomas, the author makes a few remarks on the laws of the animal economy, and proceeds to inform us, that he has reduced "medical and surgical practice (manual operations excepted) to three principles, viz. nosocoilia,* (*νοσος, morbus*, et *κοιλια, venter*,) debility and inflammation; by which morbid affections may be treated, not as a vast variety of distinct diseases, but as connected to one or other of these three heads." He says, chap. i., sec. 1.:—

"Nosocoilia, debility, and inflammation, are three morbid conditions of the system, which are distinct from each other in their nature, cause, and symptoms. I say conditions of the *system*, although each of them may be local or general, that is, confined to a part, or affecting the whole machine.

There is no disease, whether local or constitutional, unless a congenital organic affection, that is, not referrible to one or other of these heads; so that the whole catalogue of diseases generally enumerated by medical authors, should be treated not as distinct affections, but as connected with one or the other of these. If this assertion be true, (and I doubt much, although it may be impugned, that it can be overturned,) it is only necessary to be perfectly acquainted with these conditions to treat diseases upon scientific principles."

We pass over the second and third sections (on the physiology of the digestive apparatus and process of digestion) which are merely compilations, and proceed to "the functions of the liver," Sec. 4, where the author promulges the following theory:—

"The use attributed to this gland by physiologists in general is, simply to prepare the bile from the blood, which bile is to assist in the process of digestion; but I am inclined to believe that this is not the only use of the liver—the largest gland in the body; nay, I would venture to assert that this use is only secondary; and that the primary use is, to assist the lungs in the process of regenerating the blood, by freeing it of its carbon and hydrogen; and thus to act the part of an auxiliary to the lungs.

The process of respiration is considered by the majority of the profession, at the present day, to consist in the digestion, as it were, of the blood by the lungs; the lungs abstracting from it carbon and hydrogen, and supplying it from the atmosphere with oxygen. Some, however, deny that any oxygen is added to the blood by this process.

The analogy between the process of respiration and the formation of bile is remarkable: for the lungs and the liver have each two distinct sets of blood vessels; one set conveying blood for their nourishment, the other set conveying it for them to act upon, and to digest. Thus the lungs have the pulmonary arteries carrying to them venous blood, in order to be converted into arterial blood, which

* Sed potiùs Nosocœlia.—Ed.

is the proper secretion of these organs; while the liver has the vena porta conveying to it venous blood, which it digests, and from which it forms the bile. The lungs have also the bronchial arteries conveying to them arterial blood for their support, while the liver has also the hepatic artery conveying to it *arterial* blood for its nourishment. These are the only two viscera in the animal economy thus similarly organised.

The blood which is carried to the lungs by the *pulmonary* artery is loaded with carbon and hydrogen, principles which it acquired by its circulation through the body. It is of a dark purple colour, heavy, and a few degrees lower in temperature than the blood at the left part of the heart.

The blood conveyed to the liver by the vena porta is also peculiarly impregnated with carbon and hydrogen, which it acquired while circulating through the tortuous vessels of the intestines and spleen. For the vena porta is formed by the mesenteric and splenic veins; and appears, from its very formation, to be for the purpose of collecting from the system as much carbon and hydrogen as possible. The vena porta thus formed, and conveying venous blood, enters the great transverse fissure of the liver, and distributes its branches through the substance of this gland; at the extremities of which the bile is formed, a fluid which abounds with carbon and hydrogen. In like manner the pulmonary arteries enter, and are distributed to the lungs: at the extremities of which the arterial blood is formed, and carbon and hydrogen given off.

In further corroboration of this hypothesis, I will call the attention of the reader to a few circumstances (otherwise unaccountable) in the economy of the fœtal functions. First, the disproportioned and immense size of the liver in the fœtus, although the process of digestion does not then take place. Now if the only use of the liver be to form a fluid which may assist in the process of digestion, (as the profession believe,) there should be no bile formed until this process required it; whereas, on the contrary, we find a considerable quantity of it formed before birth.*

But this circumstance appears satisfactorily explained, when we recollect that the blood in the fœtus does not circulate through the pulmonary tissue, and consequently is not regenerated by the process of respiration, till the animal is born. This change in the blood is, till birth, accomplished by the liver and the placenta: by the united powers then of these viscera, the placenta and liver, the inactive state of the lungs in the fœtus is compensated for. The former organ is divided into two distinct portions, the maternal and fœtal placentæ, between which there exists no direct communication, any more than there is between the bronchial and pulmonary systems in the lungs. The fœtal blood is partly regenerated in the placenta by the maternal blood, and this process is completed by the liver. The only difference between the process in the placenta and lungs is, that in the former it takes place between two fluids, the maternal and fœtal blood; in the latter, between a liquid and an aeriform body, the blood and the atmosphere. After birth, this is the only difference between the process in the liver and in the lungs, except it be, that in the latter the blood receives a portion of oxygen gas: but the possibility of the blood being altered without the assistance of the atmosphere, as in the placenta, establishes, I conceive, the probability at least of the correctness of my theory. That the liver secretes the bile before birth, only to keep this organ fit for use immediately after the child is separated from its parent, will by no means solve the difficulty: it is only cutting the knot, not untying it; for there are many organs which are in a perfectly dormant condition during the period that the animal is in the uterus, which are forthwith called into action the moment after birth, viz. the lungs, kidneys, salivary glands, &c.

If the liver be only to assist the process of digestion by secreting bile, why is bile formed, in a vast quantity, for months before the process of digestion commenced? Why does an additional quantity of blood pass through the liver in the fœtus, when the umbilical vein might run directly to the vena cava, without giving a single branch to this organ? If the bile be merely to act on the food, why is it formed from venous blood? * Could not nature produce bile from *arterial blood*, as well as she does *all the* other fluids of the body, whether

* The meconium which fills the intestines in the fœtus, consists principally of bile.

* The circumstance that one or two anomalous cases have occurred, where the hepatic artery alone supplied the liver, and consequently that the bile was formed from arterial blood, is no more an argument against my theory, than the fact that many have been born with a malformation of the heart and other organs.

saline, albuminous, oily, or watery, &c.? But it would appear that as the lungs in the fœtus are inactive, this is compensated for by the peculiar activity of the liver, digesting the vast quantity of blood that at this time circulates through it; the moment the animal breathes, the functions of the liver are proportionably diminished, the lungs then performing their duty."—pp. 48—54.

Without doubt the liver is destined to secrete bile for the purpose of animalizing the fluids and fitting them for joining the general mass of the circulation. If, as the author asserts, its use be "to assist the lungs in the process of regenerating the blood, by freeing it of carbon and hydrogen," why is the bile so animalized or loaded with nitrogen? And surely the lungs themselves expend carbon enough without calling in the assistance of the liver, for, as an accurate author has informed us, respiration alone requires the carbon contained in at least eight or ten pounds of food in the day, which is much more than is usually taken. Besides, there is no proof that the process carried on in the lungs, has any other object than the preservation of temperature, or that any hydrogen is separated by it; and until we know more of the changes which the blood of the fœtus undergoes in the placenta, no feasible argument can be grounded on the fact, that bile is secreted before digestion is required. The hypothesis seems to have originated in the observation of some one, that those animals which have small lungs, have livers particularly developed.

Nosocoilia, the symptoms, causes, treatment, and effects of which are detailed in the next chapter, is, in truth, the "disordered digestion" of Mr. Abernethy and other writers, and need not be dwelt upon. The following, however, is a specimen of the author's theory:—

"When an individual is exposed to contagion, or meets with an accident, nature immediately summons to her assistance those organs she is wont to use, to expel from the system morbific matter; but having lost her control over them in a nosocoiliatic habit, summons them in vain.

The method she adopts for this purpose, is to direct towards various glands a plentiful supply of blood; but these glands having been previously burdened with *half regenerated* blood, in consequence of nosocoilia, are incapable of discharging their duties, and thus give rise to the morbid symptoms of fever. In a healthy and natural condition of the animal body, fevers are frequently prevented by the noxious particles of contagion being carried out of the system by some extraordinary discharge, as by an excessive perspiration, a diarrhœa, &c.* As old age, syphilis, scurvy, and cancer, are said to predispose the osseous system to fractures, by rendering it preternaturally brittle, so nosocoilia may be said to predispose the whole system to disease, by rendering it susceptible to the powers of, or unable to expel, morbific particles."—pp. 91, 92.

Debility.—The terms weakness and debility are, the author thinks, too frequently used by the profession without any definite meaning, wherefore, to obviate all ambiguity, he has two species, viz. *debilitas genuina*, and *debilitas ficta*, the former indicating "a *real* loss of tone," and the latter that state of the system in which there are "the external appearances of debility, but in reality no loss of tone or stamina in the body, the symptoms proceeding from increased action."

"*Debilitas genuina.*—By this term, I mean that condition of the system where there is a deficiency in the vital powers; a loss of strength, or tone, in the solids; and an alteration in the *quality*, and sometimes in the *quantity*, of the fluids.

The causes of this species of debility may be considered under two heads, viz. the natural or organic, and the accidental. Among the natural causes we may reckon,

* The lachrymal apparatus affords a striking example of the exertions of nature. No sooner does a foreign body get into the orbit, than this gland becomes a centre of fluxion, and the offending particle is washed away by a flood of tears: though she sometimes fails even in this function.

1st, *age*—very young and very old persons being proportionably weak or feeble;—2d, scrofula, which consists of a peculiar debility of the lymphatic system;—and, 3dly, organic congenital affections, such as a mal-formation of the heart, lungs, &c. The second class may be considered as composed of accidental causes, the number of which is infinite; and each sufficiently obvious to account for the symptoms of *genuine debility*. These are to be divided into—1st, A want of a due supply of nutriment; 2dly, Nosocoilia; 3dly, Some or all of the functions of the system having been excessively exercised, as after inflammation or fever; 4thly, Artificial or unnatural drains, such as suppuration, diarrhœa, active or passive hæmorrhages, &c.; 5thly, Violent emotions of the mind; 6thly, and lastly, Although not less powerfully, *cold*. I have thus been particular in enumerating many of the most direct causes of debilitas genuina, in order to contrast them hereafter with those of debilitas ficta; and it should be recollected that, while these circumstances produce debility in all classes of persons, the young, the adult, the old, male and female, the *quantity* of the exciting cause, necessary to produce real debility, will depend much upon the age, sex, and constitution, of the individual; e. g. a strong adult man will bear with comparative impunity a loss of blood, or a violent diarrhœa, which would diminish considerably the strength, if not totally extinguish, the vital spark in another.

The symptoms of debilitas genuina come on most generally in a gradual manner, augmenting in number and in degree, *gradatim*. The symptoms are, a sensation of weakness—inability to perform the usual duties of life—great fatigue succeeding the least exertion—susceptibility considerable—a full soft pulse, sometimes slow, but more frequently quick, at all events increased by the most trifling stimuli—a general relaxation of all the secretions, producing excessive perspiration, a moist tongue and mouth, pale copious urine, diarrhœa, loss of appetite;—and lastly, great weakness, and a general emaciation and wasting of the body. These all are proportioned to the duration of the affection, and to the violence of the exciting cause.*—pp. 103—106.

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* The above catalogue contains the symptoms, modified according to the nature of the cause of all the diseases of debility, as hectic fever, phthisis, &c. &c.

Debilitas ficta.—The appearances of debility may arise either from a deficiency of the *vis vitæ*, or from an over or unnatural action of those vessels which convey those substances of those liquids or fluids over the body, upon which all parts depend for support. The whole body depending directly for life and strength upon the blood, is affected by this fluid, either when there is a deficiency or an over quantity of it: the latter is actually as injurious to the body, or to any part of it, as the former. Each organ or viscus requires a *certain* portion of it, which being either increased or diminished in quantity, more or less deranges the functions of that part; producing in the former case a morbid activity—inflammation; and in the latter, a want of energy or power—debilitas genuina.

If the cause producing the morbid activity be considerable; if the system has been labouring under the effects of nosocoilia; or if the organs affected be supplied with nerves from the great sympathetic; the symptoms which usually characterize inflammation do not appear, but symptoms very much resembling those of debilitas genuina supervene—these appearances deceive not merely the friends of the individual, but too frequently the medical attendants. This is what I term *debilitas ficta*.

How an increased quantity of the blood, which conveys to all parts nutrimentitious principles, and upon which the whole animal machine directly depends for power and for the vis vitæ, can possibly produce the appearances of weakness is, I acknowledge, with some difficulty comprehended. But were I even unable satisfactorily to elucidate the way in which this spurious debility is produced, or the modus operandi of nature in those cases, the innumerable facts which I could adduce from my own experience and that of others, would be sufficient to substantiate the truth of my *theory*.

The three circumstances which I have just mentioned as predisposing the system to *debilitas ficta*, act pretty much in the same way: whether it be the degree of the exciting cause—the nosocoiliatic state of the system, or the parts being intimately connected with the brain by the great sympathetic nerve, the powers of nature appear to be unable to produce that re-action which causes the symptoms of inflammation, but now those of debilitas ficta. These symptoms being more or less suppressed in this case, life becomes extinguished by a latent action, resembling an internal combustion, which

sometimes proceeds with the most effective energy, even to the utter consumption of the body in which it exists.

The plain and obvious reason why, in all cases where there is increased action, the common symptoms of inflammation do not appear is, that nature, either from the quality of the cause, or of the part affected, is actually unable to excite those powers which, under ordinary circumstances, she readily does. The pathological condition then of the system, when labouring under *debilitas ficta*, is an overburdened state of the vessels, smothering as it were the symptoms of inflammation, and exhibiting the external appearances of debility.

That this state of the system is not merely imaginary, can be proved by many circumstances; but none is more convincing than the fact, that blood drawn in these cases always relieves the individual, removes the symptoms of weakness, and brings on the real characteristics of inflammation. To produce these effects from blood-letting would be utterly impossible, were there an actual loss of tone in the system, or was not the pathological state of the body such as has been described in the preceding paragraph. Let not the reader, however, suppose that debilitas ficta is of rare occurrence, far from it: there are many diseases described and treated as cases of genuine debility, that are really examples of this species."—pp. 116—121.

The exciting causes of *debilitas ficta* are all those which excite fevers, such as damp air, the poison of contagion, suppressed perspiration, &c. *Debilitas ficta*, in fact, is only another name for the first stage of fever or inflammation.

"The fact is," says the author, "that the only way in which the symptoms of *debilitas ficta* differ from those of active inflammation is in the sensation of weakness, and the smallness and feebleness of the pulse; in every other respect they are the same. In short, what is this debilitas ficta but a violent and dangerous degree of inflammation, so affecting the vital powers as to suppress the exertions of nature; and being thus likely to deceive, to demand particular attention.

It was stated before that the symptoms of *debilitas genuina* come on *gradually*, while those of debilitas ficta come on for the most part *suddenly*, and unpreceded by any circumstances sufficient to account for the degree of weakness that is felt. I shall now enumerate and contrast the symptoms or appearances of both species:—

	In Debilitas Genuina.	*In Debilitas Ficta.*
1. The symptoms come on	Gradually and Slowly.*	Suddenly.
2. Causes	Always manifest.	Are never such as are calculated to produce real debility.
3. Sensation	Of weakness.	Of weakness.
4. The parts affected with debility	Muscular, Glandular, and Absorbent systems, primarily; and all parts secondarily.	Only the voluntary muscles.
5. The pulse	Soft and full, easily excited.	Small and contracted.
6. The bowels	Relaxed.	Constipated.
7. Secretions	Relaxed.	Suppressed or Diminshed.
8. Syncope	Very common.	Never occurs.
9. Duration	Sometimes a considerable length of time; except when produced by some manifest cause.	Always comparatively short, sometimes not more than 72 hours when life becomes extinguished.

* Except when produced by hæmorrhage, or any violent accident, in which case, the causes being sufficiently apparent, there is no danger of being deceived.

A little attention to these symptoms will enable any person to distinguish between the two species of debility—the symptoms of debilitas genuina coming on gradually, preceded by some circumstance sufficient to account for the weakness, and the general relaxation of the secretions, should at once point out the nature of the case: whereas the symptoms of debilitas ficta coming on suddenly, unpreceded by any debilitating cause, and the suppression of the secretions are, one would suppose, sufficient diagnostics. The *bare sensation* of weakness should never influence our judgments, without other concurring circumstances; and we should be the more cautious in preventing ourselves from being swayed by that natural prejudice respecting debility, which is so general, as the two species require the very opposite modes of treatment—that which is suitable in one, being downright fatal in the other."—pp. 123—126.

Bloodletting and the antiphlogistic regimen must be employed.

The author has frequently been called to attend patients labouring under *debilitas ficta*, and has always had to encounter the greatest prejudice.

"I recollect," says he, "attending a lady in the winter of 1823, in this city; she was about fifty years of age, the mother of a large family, and the wife of an opulent merchant. Upon first seeing her, I at once conceived she was labouring under debilitas ficta, she having many of the symptoms described under that head. She was rather of a delicate appearance, and complained of a sensation of great weight at her chest; her countenance was sallow, her tongue white, her mouth parched, accompanied with great weakness, a total loss of appetite, &c. Considering it to be produced by nosocoilia, I ordered cathartics and bloodletting. The latter proposal was at first rejected with great confidence; some of the friends observing, 'that if it were possible to put blood into her, it would be more proper than to take it from her.' To which observation I replied, 'that I was willing to meet any medical gentleman on the subject; if they differed with me, I would of course yield; but if blood were not taken, and the tonic plan adopted, the lady's recovery I verily believed to be impossible; and if she did recover under their mode of treatment, I should give up my profession, acknowledging that I knew nothing about it, and therefore could not conscientiously practise it.' The confident manner in which I spoke of my proposal made them consent; and I forthwith detracted sixteen ounces of blood. During this operation, the pulse, which before was small and contracted, became fuller and freer, and the weight which she complained of at her chest was diminished. Next day she felt, on the whole, somewhat better; the blood exhibited a considerable buffy coat, and was very much cupped. I considered it judicious to repeat the bloodletting that and the following days, which was attended with the same beneficial effects. Having then, as I conceived, sufficiently unburdened the vessels, I directed my *whole* attention to the chylopoietic viscera, and in the course of a few weeks removed the affection, for which I was sent for. I have detailed this one case out of many, in order to give the inexperienced practitioner some idea of the difficulties he will have to encounter in treating debilitas ficta."—pp. 129—131.

We are next presented with the case of the late Lord Byron, which the author has transcribed from the account given by Count Petro Gambia.

"April 9th, Lord Byron had suffered visibly in his health during the last day or two: the events just mentioned, and the weather, had made him more than usually nervous and irritable; but he this morning received letters from Zante and from England, which raised his spirits exceedingly. He had not been on horseback for three or four days; and though the weather was threatening, he resolved to ride. Three miles from the town we were overtaken by a heavy rain, and we returned to the town-walls wet through, and in a violent perspiration. Two hours after his return home, he was seized with a shuddering: he complained of fever and rheumatic pains. At eight in the evening I entered his room; he was lying on a sofa, restless and melancholy. He said to me, I suffer a great deal of pain; I do not care for death; but these agonies I cannot bear. The medical men proposed bleeding, but he refused, observing, 'Have you no other remedy than bleeding?—There are many more die of the lancet than the lance.' Some of the physicians answered, that it was not absolutely necessary to bleed as yet, and I fear were too much inclined to flatter his prejudice against that operation. But there was not then the slightest suspicion of any danger, nor was there any at that moment.

10th. The next day he felt himself perpetually shuddering; but he got up at

his usual hour, and transacted business; but he did not go from home.

12th. The next day he kept his bed with an attack of rheumatic fever.

13th. He rose from his bed the next day, but did not go out of the house. The fever appeared to be diminished; but the pains in his bones and head still continued: he was melancholy and very irritable. He had not been able to sleep since his attack, and he could take no other nourishment than a little broth, and a spoonful or two of arrow-root.

14th. The following day he got out of bed at twelve: he was calmer; the fever was less, apparently, but he was very weak, and suffered from the pains in his head. He wished, however, notwithstanding the weather was threatening, to go out on horseback, or at least in a boat; but his physicians dissuaded him. It was now thought that his malady was got under, and that in a few days he would be quite recovered. There was no suspicion of danger.

15th. The fever was still upon him; but the pains in his head and bones were gone. He was easier: he even wished to ride out; but the weather would not permit. Both on this day and the day before, he had entertained some suspicions that his complaint was of no ordinary nature, and that his physicians did not understand it; but he had not the least apprehension of danger.

16th. He was better; his complaint was following the usual course, and there was no fear.

17th. The next day I contrived to get to his room. His countenance at once awakened the most dreadful suspicions: he was very calm; he talked to me in the kindest manner. This was the first day that the medical men seemed to entertain serious apprehensions of the event: he was bled twice; first in the morning, and at two in the afternoon, and lost about two pounds of blood. He did not faint, and his eyes were lively, but he had no sleep; he perspired on the head and neck: and the disease seemed attacking the head. He was dreadfully distressed by want of sleep; and he now said to Dr. Millingen, 'I know that without sleep, a man must die or go mad: I would sooner die a thousand times.' He repeated this to his valet Mr. Fletcher.

18th. During the night of the 17th, he had some attacks of delirium, in which he talked of fighting; but neither that night nor the next morning was he aware of his peril. This morning his physicians were alarmed by appearances of inflammation of the brain, and proposed another bleeding, to which Lord Byron consented, but soon ordered the vein to be closed. Dr. Bruno entreated him, with tears in his eyes, to be again bled. No, he said: if my hour is come, I shall die whether I lose my blood or keep it.

Since their last consultation, the majority of the medical men had thought that the crisis of the disorder was now come, and that the principal danger now was the extreme weakness of the patient; and that restoratives should be administered. Dr. Bruno thought otherwise; but it was resolved to give a draught of claret and bark and opium, and to apply mustard blisters to the soles of the feet. Byron took the draught readily, but refused the blisters: accordingly I was sent for to persuade him, and I returned in all haste with Mr. Parry.

It was about six o'clock in the evening when he said—I want to go to sleep now; and immediately turning round, he fell into that slumber, from which, alas! he never awoke!

On my arrival, they informed me that he was asleep, and that he had suffered the blisters to be applied, not to his feet but elsewhere. The physicians augured well of this sleep—perhaps it was but the effect of the medicine, and only hastened his death.

Dr. Bruno's report of the appearances on Dissection.

1. On opening the body of Lord Byron, the bones of the head were found extremely hard, exhibiting no appearance of suture, like the cranium of an octogenarian, so that the skull had the appearance of one uniform bone: there seemed to be no diploe, and the sinus frontalis was wanting.

2. The dura mater was so firmly attached to the internal parietes of the cranium, that the reiterated attempts of two strong men were insufficient to detach it; and the vessels of that membrane were completely injected with blood: it was united from point to point, by membraneous bridles, to the *pia mater*.

3. Between the *pia mater* and the convolutions of the brain were found many globules of air, with exudations of *lymph* and *numerous adhesions*.

4. The great falx of the *dura mater* was firmly attached to both hemispheres by membranous bridles, and its vessels were tinged with blood.

5. On dividing the medullary substance of the brain, the exudation of blood from the minute vessels produced specks of a bright red colour. An extravasation of about two ounces of bloody serum was found beneath the *pons varolii*, at the base of the hemispheres, and

in the two superior or lateral ventricles a similar extravasation was observed at the base of the *cerebellum*, and the usual effects of inflammation were discoverable throughout the *cerebrum*.

6. The medullary substance was in more than ordinary proportion to the corticle, and of the usual consistency. The *cerebrum* and the *cerebellum*, without the membranes, weighed six pounds, (' *mediche.*')

7. The channels, or *sulci* of the blood-vessels on the internal surface of the cranium, were more numerous than usual, but small.

8. The lungs were perfectly healthy, and of much more than ordinary volume, (' *gigantiselle.*')

9. Between the pericardium and the heart, there was about an ounce of *lymph*; and the heart itself was of greater size than usual, but its muscular substance was extremely flaccid.

10. The liver was much smaller than usual, as was also the gall-bladder, which contained air instead of bile. The intestines were of a deep bilious hue, and distended with air.

11. The kidneys were very large, but healthy, and the *vesica* relatively small." pp. 131—138.

That this noble author was improperly treated, partly from his own obstinacy, and partly by the physicians who administered the bark and wine, is obvious enough. Mr. S. next speaks of the case of Lord Londonderry, which he says:—

" - - - affords another instance of the evil of medical men not distinguishing between debilitas ficta and genuina. Had that nobleman (the loss of whose services has been so deeply felt by his country). upon complaining of general uneasiness, weakness, and slight pains in his head, been treated as the nature of his disease (which I maintain to have been debilitas ficta,) required; and instead of the application of cupping-glasses, had blood been detracted from him copiously, his valuable life would no doubt have been preserved. In corroboration of this assertion, I appeal to the fact of his immediate restoration to his senses upon the loss of blood produced by his fatal act; and this is very evident from the earnestness of appeal to his physician."—pp. 139, 140.

A correct account of this lamented statesman's case has not been published, and consequently we are unable to judge of the propriety of the plans of treatment which were adopted. The last sentence of the author savours of ingenuity, and what else we know not.

The fourth section, which embraces the subject of inflammation, its treatment, terminations, &c., is for the most part compiled from the works of Hunter, Thomson and other eminent writers.—After a description of the various species of mortification, and their proximate causes, we have the following observations on that which is produced by inflammation:—

" Many who have written on this extensive subject, (a more outline only of which I have given,) and many who treat it at the present day, appear to forget,—1st, That a mortified part is actually dead; and 2dly, That there are more species than one. There appears great ambiguity in the treatment of mortification, which I conceive may, in a great measure, be obviated by simply attending to the cause which produced it. When a part is mortified nothing can restore it, therefore our whole attention must be directed to the condition of the living parts in its neighbourhood. In treating any of the species of this affection, it will be of the first importance to consider what is the pathological condition of the mortified part, and of the parts in its vicinity; the former is dead, without vitality—an inorganic mass—the state of the latter depends entirely upon the exciting cause.

The first kind of mortification is that produced by inflammation, by increased action of the vessels of the part; the vessels, before this occurs, are in an active condition, similar to that before suppuration takes place, only in a much greater degree. Nature, in mortification, is relieved by the part becoming dead, and in suppuration, by the vessels becoming unburdened; so that " the spreading of mortification," as it is commonly termed, is owing *entirely* to the state of the adjoining parts. The object then to be accomplished in the treatment of mortification is to prevent the affection from spreading: this can be done only by removing the *proximate* cause, which I before stated to be, in this species, the highest degree of action of the vessels. Whatever therefore was, previous to the mortification, calculated to prevent its occurrence, must of necessity possess

equal power in checking its progress, not by acting on the dead but on the living parts. Further, whatever was calculated to increase the inflammation in the first instance, will of course tend to augment it in the latter, and of necessity to produce more mortification, or, as it is improperly expressed, to cause it "to spread." What then is to be thought of those gentlemen who advise, *indiscriminately*, hot spirituous applications to a mortified part? In the first place, they appear to know very little about the condition or nature of parts under such circumstances; or if they know much, their practice is not influenced by their knowledge. Secondly, the fatal termination of many cases of mortification, which they *scientifically* say "cannot be checked," may justly be attributed to the mode of treatment; for I assert, without fear of contradiction, that nothing can possibly be more calculated in this species of mortification (which occurs ninety-nine times out of a hundred) to increase the destruction of the parts, than the before-mentioned application. Let any one prove to me, that the theory I advanced respecting the proximate cause of mortification is incorrect, and then I will acknowledge the above assertion to be wrong; but while I know that increased action of the vessels of a part is the proximate cause, I can never view the above remedies but with abhorrence. I request the reader to recollect, that I do not say *hot spirituous applications* are improper in every kind of mortification, I only allude to the species of the affection now under consideration.

After what I have just said, but little remains for me to add on this part of our subject. As the sphacelated or mortified part therefore is *dead*, cold or hot, soothing or stimulating, applications *to it* are all the same, nothing can produce an alteration or an amendment in a *dead* part. Whatever, therefore, we order, must be with a view of acting upon the living parts, so that in the present instance, while they are labouring under the highest degree of arterial action, morbid sensibility, &c., in fact high acute inflammation, our duty will be to treat it upon the common principles. In proportion as we subdue this increased action, do we put a check to the further progress of the mortification.

This plan is to be persevered in till the *adjoining* inflammation terminates by suppuration. Should there afterwards be much general debility, the method of treatment does not differ from that of debilitas genuina. Notwithstanding all that has been from time to time written on the subject of mortification, implying that its treatment is very difficult, I trust the reader will no longer conceive that there is attached to it any such ambiguity. The first stage of this species comes under the head of inflammation, and is to be treated according to the antiphlogistic regimen; while the second stage belongs to debility, and is to be treated with tonics: where then is the difficulty, the ambiguity, and the uncertainty in the treatment of this affection so generally believed?

Before concluding this part of the subject, I must notice a direction found in most of the best surgical books, but of which I beg leave to remark, that it is unscientific, erroneous, and injurious.—The direction I allude to is the following, viz., "that when there is necessity to remove a mortified limb, we should *always* wait for a line of separation between the living and the dead parts." Now this direction is only applicable to one species of mortification, viz., that arising from an internal cause; and the reason why it is even in this case applicable, is because we know not the powers of nature till this line be formed; and therefore there would be no use in operating on an unfortunate person whose strength would not be sufficient to heal the wound. I do not by these remarks pretend to assert, that we should, forthwith upon mortification occurring, remove a limb: who would dare, at the present day, to operate on inflamed parts? but as soon as the inflammation in the neighbouring parts has subsided, then, if it be judicious to remove the limb at all, the operation should be performed."—pp. 182—187.

The author next proceeds to make a few observations on the nature and treatment of fever, or *debilitas ficta*, more fully developed. Commencing with Cullen's class, pyrexia, which contains forty affections, he observes, that "instead of their being distinct diseases produced by various proximate causes, and requiring a variety of methods for their treatment, they are, with a few exceptions, only modifications of the same state of the system," and that "their treatment, which is included in the antiphlogistic, tonic, and antinosocoiliatic regimens is the same, differing only in degree, not in nature." In this, indeed, there is little of

novelty, for who doubts that *phrenitis* and *pneumonia* are equally inflammations, requiring generally the same plans of treatment; or that an ague, whether under the quotidian or tertian type, indicates a similar state of the system? According to Cullen, where *synochus* ends, there *typhus* begins, from which it clearly appears that he, like our author, viewed the change as only "a modification of the same state of the system." Synocha probably seldom occurs without local inflammation, and therefore properly belongs to the phlegmasiæ; but the above remark is equally applicable to epistaxis and hæmoptysis, under the class of hæmorrhagies, and to several others. Mr. Sleigh further asserts, that fever is an inflammation of the whole body, that it only differs from a local inflammation in being universal. A doctrine unhappily much broached of late, which has led to the employment of general bloodletting in fevers of the worst description. Sydenham, it is true, whose *worst* points have been most copied, recommends bleeding in the early stage of every fever; but as a general principle the practice is highly to be condemned, and should never be employed, especially in London, unless some topical inflammation, or other urgent circumstance, indicates it. In rheumatism, it notoriously protracts the cure, and favours a metastasis to the vital organs; and in the fever called typhus deprives the patient of that support which no stimulants can restore. Where, a fever is *forming* in young and healthy persons, the practice may be admissible, not as a matter of course, but with due caution and deliberation. Where, however, a vital organ is implicated, bloodletting must be promptly and vigorously pursued. With the following sentiments of our author we entirely concur:

"Were I asked," says he, "would I bleed in fevers, or would I order tonics I would not give a decisive answer: my reply would be, it must entirely depend upon circumstances; in many cases I should detract blood, and that most copiously; while in others I would give powerful tonics: the symptoms would be my only guide, and the only regulators of my practice."—p. 249.

"The sixth chapter, which treats of certain morbid affections of the viscera, is a sort of appendix to that on nosocoilia, and is illustrated by the following, and a few other cases.

"I was consulted in the month of August, 1823, by a gentleman of about thirty years of age, for a violent pain in his chest, with a difficulty of breathing. He said these symptoms came on suddenly about three or four days past, but were now very much augmented in violence. He also stated, that better than a year before he was attacked in a similar way, and was attended by two or three medical men; that he had been then bled repeatedly, and had been confined to his bed for nearly three months, 'and now,' he added, 'I fear I shall be laid up for some time; but do you take enough of blood from me at once, if possible, to check it in the beginning.'

I made several inquiries, from his answers to which I concluded his symptoms arose from an affection of the digestive organs, and consequently that I had no authority to bleed him. I came to these conclusions upon the following grounds: first, he had not been exposed to the exciting causes of inflammation; secondly, he had been exposed to the exciting causes of nosocoilia; thirdly, the difficulty of breathing, and the pain in his chest came on suddenly after eating a hearty supper; fourthly, the other symptoms of inflammation would, at this stage of the disease, have been very evident, had it been an inflammatory attack, whereas there was a total absence of them; fifthly, the general symptoms of nosocoilia were present; sixthly, and lastly, he had been a little relieved by a dose of salts he took the day before he consulted me.

Upon my communicating to him my belief of the nature of his present affection, and that I would not bleed him, he was much surprised, and having read some medical works, he observed, "are not pains in the chest, and a difficulty of breathing, the true symptoms of pleurisy; and is not bleeding the sure method of curing me? for I am convinced I would have been in my grave only for the loss

of so much blood when I was attacked before with exactly the same affection." However that may be, I said, I am convinced that you do not at present require bleeding; and letting blood would be highly injurious to you. I further endeavoured to explain to him, as well as I could to a person unacquainted with the animal functions, the grounds of my opinion, and that if I did not considerably relieve his sufferings in forty-eight hours, I would then bleed him. 'Well,' said he, 'I will try you for this day; and if I do not, at all events, feel a little relieved on to-morrow, I then must be bled."

I then ordered him an emetic of ipecacuanha, and in the evening a strong cathartic, composed of six grains of calomel, and ten of jalap. Next day he felt much relieved, and by repeating the cathartic medicines for two or three days, his pulmonary affections were totally removed; and he said he was now convinced by experience of the utility of my plan, and attributed his former tedious recovery to the methods that had been adopted by his medical attendants."—pp. 266—268.

In the concluding section the causes of phthisis pulmonalis are discussed, but the gist of the argument is to prove that *tubercles* in the lungs are frequently produced by disorders of the digestive organs, (nosocoilia,) and all that is advanced to support the assertion will occur to the reader who has reflected on the author's theory of the functions of the liver. The liver, which according to that hypothesis, is auxiliary to the lungs, is rendered incapable of separating from the blood that quantity of carbon and hydrogen which the well-being of the system requires; the other organs sympathize; the skin becomes hot and dry; the mine scanty, and the bowels constipated; the whole burthen falls upon the lungs, which become so oppressed that difficulty of breathing and pain are produced; and those fluids which should have been carried off by the liver and other auxiliaries, are partly taken up by the lymphatic vessels, and produce in the glands of the lungs that altered condition which constitutes tubercles. Such is the author's theory; the treatment is of course directed to the *artifex sceleris*—the digestive apparatus. Four cardinal rules for the regulation of medical and surgical practice conclude the volume. In conclusion we must observe, that the expectations which a perusal of the introductory paragraphs excited in our minds have not altogether been realized. Indeed it is very doubtful whether the author has established any thing that was not previously known, or whether his work possesses any determinate advantage over those elementary treatises which have preceded it. He has certainly hatched a new theory or two, and newly fangled some of the doctrines of his predecessors, but we are not certain that he has been happy in either. What is his *nosocoilia*, but the chylopoietic derangement of Abernethy? Or the *debilitas ficta* more than the first stage of fever, the *prægressis languore*, &c. of Cullen? His views of inflammation and fever are not novel, and what he has advanced on the causes of phthisis is destitute of proof. Bating theory and controversy, what remains of the work will be useful to the student.

WESTMINSTER MEDICAL SOCIETY.

Discussion on Hydrophobia.—January 21.

A Mr. Hunt, on taking the chair, said, that he had been requested to do so in consequence of the non-arrival of the president, and as there was no paper immediately before the Society, he should feel obliged by any member or visitor introducing a subject for discussion. A long silence followed, but at length Dr. Somerville rose for the purpose of relating a case of hydrophobia, which fell under his notice some time since. The patient was in St. George's Hospital, and had the usual symptoms of this dreadful malady, which came on three weeks after a bite from a rabid dog; the case terminated unsuccessfully; the treatment employed

was the abstraction of blood in large quantities, and the exhibition of full doses of opium.

On post-mortem examination, the mucous membrane lining the pharynx, œsophagus and stomach was found to be inflamed, the membrane being of the colour of wine-lees, the lungs were gorged with black blood, and the bronchiæ filled with frothy mucus.

Mr. Bingham related the following case, to prove that "a disposition to snap" sometimes forms a marked symptom in hydrophobia. A few years since when practising in the country he was called to see a young man, whom he found labouring under every symptom of hydrophobia; he was perfectly sensible of his situation and devoid of anxiety, but there was something in his countenance which indicated cunning—a sort of mischievous look. He was strapped down in bed, but so loosely that he could raise himself into the half inclined position. Mr. Bingham sat down by the bed-side of the patient, who soon after asked for something to drink, and some barley-water was tendered him in a spoon. "I cannot reach it," (said he,) the spoon was brought still closer to his mouth, "I cannot reach it yet," he exclaimed, and the spoon therefore was brought in contact with his lips; when he immediately sprang up and attempted to seize the person's hand.—The intention of biting the hand was frustrated by its being suddenly withdrawn. "Ah! I thought I should have had you then," he exclaimed; thus avowing his disposition to have bitten his friend. This circumstance occurred in the forenoon about ten o'clock. Mr. Bingham visited the patient again in the afternoon, and found him quite insensible, but such a large quantity of froth was issuing from his mouth, that Mr. B. remarked it might be aptly compared to the pouring out of yeast from the bung-hole of a barrel of beer under the process of fermentation. In conclusion, Mr. Bingham remarked, that he had seen other cases of hydrophobia in which the disposition to bite was not manifested.

Dr. Copland said, that he once saw a patient labouring under hydrophobia, who declared that he felt an almost uncontrolable desire "to snap at" those around him, and that he was only restrained by his "moral disposition."

Dr. Macleod, in offering some remarks on the disease under consideration, entered into the question of the propriety of excision and cauterization, as preventives after the bite of a rabid animal. Dr. Macleod alluded to a recent case, in which we understood him to say, that although the parts were excised within three or four minutes after the bite, and the wound cauterized, symptoms of hydrophobia supervened.

Mr. North did not consider the absorption of any specific virus so rapid, as supposed by Dr. Macleod, and cited instances which he thought were familiar to all, of cow-pock matter remaining inactive under the skin for a period of several weeks, and then producing its specific effects.

Dr. Macleod, in further proof of the rapidity with which the process of absorption was effected in the body, related some experiments which had been instituted in France, one of which was the injection of prussic acid and water into the lungs, with the simultaneous injection of a solution of sulphate of iron into the bladder, the result of which was the formation of prussiate of iron in the bladder, in the space of a few minutes.

Dr. Granville quoted the experiments of Dr. Barry on the utility of applying cupping-glasses in cases of poisoned wounds. As these experiments, and the result thereof, have so recently appeared in THE LANCET, it will be unnecessary to recapitulate them.

SURGICAL HUMBUG.

Letter on Suspended Animation, containing Experiments showing that it may be safely employed during Operations on Animals, with a view of ascertaining its probable utility in surgical operations on the Human Subject, addressed to T. A. Knight, Esq. of Downton Castle, Herefordshire, one of the Presidents of the Royal Society, and read before it by Sir H. Davy. By Dr. H. HICKMAN, *of Shiffnal, member of the Royal Medical Societies of Edinburgh, and of the Royal College of Surgeons, London.* Ironbridge. Smith.

To the Editor of THE LANCET.

"Oh! for a Hymn,
Loud as the virtues thou dost loudly vaunt,
Not practise."—BYRON.

SIR,—A few days since I took up a fragment of an old Shrewsbury paper, in which I observed a paragraph from the above letter, inserted most probably by the author, who endeavours to show, by a series of experiments on mice and

dogs, that it would be advisable before performing important operations on human subjects, to expose them for a short time to an atmosphere of carbonic acid gas, by which means they may be rendered incapable of feeling pain during the operation.

Now giving this learned Theban full credit for his charitable intentions towards that unfortunate portion of his fellow creatures who may be doomed to come under his care, or to solicit his advice in any surgical case, can he for a moment suppose that any *medical man* of sense and judgment will be so far led away by a proposal so utterly at variance with all he has ever heard, saw, or read, of the deleterious effects of respiring the fixed air, even for a short time, as to believe, for a moment, that this letter was published with any intention of benefiting mankind; or, that it was not intended, like the wonderful but more innocent challenges and assertions of the celebrated Dr. Smith, of Upton Magna, to serve as a decoy by which the credulous may be induced to give up their senses as well as their cash to men, who though perhaps not greater fools, are at any rate greater knaves than themselves.

I must now beg Dr. Smith's pardon for making use of his name in such company, for I have no hesitation in saying, that I consider an open and downright quack to be as far superior to a plausible quacking physician, as a declared enemy is superior to one who conceals himself under the mask of friendship, that he may inflict the deeper injury.

As for that large portion of society, who do not belong to the medical profession, does he suppose that they would not laugh him to scorn if he were to recommend a man who was about to have a tooth drawn to be previously hanged, drowned, or smothered for a few minutes, in order that he may feel no pain during the operation? While writing this sapient puff, (for it claims no other appellation,) did he think, if he ever thought at all, which for his own sake I hope he did not, that animation was to be suspended by the means proposed, without occasioning sensations far more horrible than the pain inflicted by ordinary operations; or, does he suppose that after amputating a limb, (granting to him for the sake of argument that animation may have been suspended during the operation,) does he, I ask, think that the stump will heal without pain, or inflammation, as he affirms was the case in his first experiment on puppies' ears; although he must know (*provided he knows any thing about it*) that it is by an inflammatory process the parts divided by an operation are again united, and that inflammation forms an important part in the healing process, in all instances.

The Doctor concludes his noble, disinterested, and scientific letter in these words, "Although I could not conscientiously recommend a patient to risk his life in the experiment, (after having a little before assured us that it was perfectly safe,) I certainly should not hesitate to become the subject of it, if I were under the necessity of suffering a long or severe operation." How magnanimous, what a noble declaration, as though he does not know, that if he were weak enough to make such a proposal, (which in this case I know he would not be, when really about to undergo an operation,) that it would, I sincerely hope, and believe, for the credit of the profession, be utterly impossible to find any surgeon so *great a fool*, and so unwarrantably bold as to undertake that operation on such terms.

Now I do fervently hope that the letter itself may be a complete hoax, and not written by Dr. Hickman; for, in this age of science and gentlemanly acquirement, I feel assured, that no man who has any claim to the honourable appellation of a Doctor of Physic would so far disgrace both his profession and himself by writing such a *tissue of quackery*, which he himself, and every medical man must know is (to say the least of it) *humbug*.

The writer, whoever he may be, seems to be perfectly well acquainted with the generality of his countrymen, and must suppose that the majority are not competent to judge in such cases; or, he would not have dared to offer so gross an insult by laying such trash before them;—but, I may be wrong, perhaps he compares mankind to the audience of a pantomime, who always applaud that actor most *who plays the fool best*.

I shall now conclude with a few words from a late poet, which the Doctor's conscience will teach him to apply, and to feel.

——— "What I have spoken
Remains to speak of me."———

I am, &c.

ANTIQUACK.

HYDROPHOBIA.

To the Editor of THE LANCET.

SIR,—There is as much hypocrisy in medicine as in religion; setting aside the cant of philanthropy, which is second in infamy to none of the cants that are canted in this canting age. How often do we meet with the more innocent, yet not less contemptible humbugs of eccentricity in dress, manners, and opinions—assumed merely for the sake of a little notoriety? These are (as Cullen was wont to say of his theories) "tubs for the whales," and as long as they succeed as decoys many will make use of the bait. Variety of opinion on medical subjects must for ever exist, and they add much to the zest both of the study and the practice of the art; yet it has ever been to me matter of as much surprise as of regret, that in supporting particular views so much bigotry and intolerance should be displayed, for what can we call but bigots men who can only see what they believe, and actually refuse to believe what they see? What notion, however absurd or unfounded it may appear to the great body of the profession, but has its zealous and conscientious advocates and throng of devotees? What fact upon record has not been sincerely and sturdily denied? Fever, either its causes, its nature or what is more to be lamented its treatment, will afford ample illustrations of these truths; a priori, from the frequency of its occurrence, its fatality, and the vast space over which it spreads its ravages, one would suppose that something determinate regarding it would have been obtained, and verily we have had a multiplicity of writers on the subject; the title pages alone of books professing to illustrate fever, would keep the cider cellar in pipe matches for a century. But, alas! what has resulted from these lucubrations—darkness rendered more visible. Not only upon no point is opinion fixed, but the greatest possible difference exists regarding all. We have, in the most ultra sense of the words, contagionists and non-contagionists, nor are many of those who allow greater latitude to the causes, less dogmatical in prescribing

——"Certi denique fines
Quos ultra citraque nequit consistere rectum."

The procrustes of the Medico-Chirurgical will at once occur to you as an example of this class. Again what diversity of opinion as to its nature and seat: some deem fever a general, others a local disease; some conceive that it takes up its abode in the head, others in "the tomb of boiled and roast, and fish and fowl;" some—but

"Cætera de genere hoc (adeo sunt multa) loquacem
Delassare valent Fabium."

It is a fact in the history of theories not generally known, that when the doctrines of the humoral pathology were taught and inculcated in the University of Edinburgh, some of the students happening to read Hoffmann, brought the novel views of that illustrious individual before the medical society—the discussions attracted attention, which induced some of the professors, among the rest Dr. Cullen, to attend; and lame as we may suppose the reasoning of mere Tyros must have been upon such an obscure subject, yet, what the pippin dropping from the tree was to Newton, this visit to the R. M. Society was to Cullen—the basis of his fame. I have heard that his lecture, when recanting his errors, was a most splendid specimen of candour; it may be summed up in the language of the eloquent and philosophical Cicero, and it were well if many in these days would follow the example; "Docti ab aliquo," (says the Roman orator,) "facile et libenter sententia commutabimus, non enim parum cognosse, sed in parum cognito, stulte, et din perseverasse turpe est; propterea quod, alterum communi hominum infirmitate, alterum singulari unius cujusque vitio est attributum." I confess, Mr. Editor, that I have been no less annoyed than disgusted, when I have seen, through the medium of THE LANCET, the manner in which Dr. Cullen is invariably spoken of, in the lectures upon the practice of physic, delivered in Webb-street. Can Dr. Armstrong in sincerity assert that in his opinion, "Cullen was a man of no genius?" He may perhaps say of Dr. Cullen and with justice—

"—— labris sitiens fugientia captat
Flumina."

But Dr. Armstrong may rest assured many will with the same satirist ask and add,

"—— Quid rides? Mutato nomine, de te
Fabula narratur."

But this is digressing: I was remarking how contradictory the views were regarding the nature of fever. They are as much so in regard to the remedial means; whilst one physician prescribes bark, wine, and opium, in every case, another is as partial to cathartics or antimonials, whilst a third only attends to the maxim,

"O Medici! mediam pertundite venam."

Such being the state of opinion on so common and palpable a disease, we cannot wonder at still greater (if possible) differences existing in regard to so rare, and so ill defined a malady as hydrophobia, or even that its very existence should be denied. From the circumstances of a late case which was sent to the Royal Infirmary of Glasgow, and which (after the boy had recovered!) was pronounced not to be hydrophobia by the medical officers of that establishment, I have been led to indulge a hope that they are in possession of criteria by which the disease may be identified, and my object in addressing you is, to call upon the physicians to lay them before the public. Surely they could not reason in the unphilosophical and Abernethian-like mode of deciding upon spurious and genuine syphilis! That because the boy recovered, the disease was not hydrophobia! That he did recover is most certain, nor is it less true that some months previous to his illness, his hand was much lacerated by a mad dog, and the first symptoms of the disease were spasms, particularly about the throat, occasional delirium, and dread of water. Is there not something like cause and effect here? Although I do not join an ancient philosopher in believing "Omnia corporis mala ab anima procedere," I am fully aware of the mighty influence of the mind in exciting and giving peculiar types to disease, and that in this instance it did not play the chief part in the drama, I am prepared to say; but it is worthy of remark, that the boy went through the operations (although superficially performed) of excision and cauterization, and I have yet to learn that his mind was not altogether at rest about the accident. I shall finish by stating the facts which induce me to believe that the dog was rabid which bit the boy. Well, I recollect the unlucky morn on which the hue and cry of "a mad dog, a mad dog," was raised, and that he had bitten several; among the number a most valuable setter belonging to an intimate friend, and my favourite terrier. The enemy was quickly pursued by a mob armed with guns, pitchforks, spades, &c. and killed, but not before he had bitten the boy alluded to, and a couple of mastiffs, the guardians of a printfield. The proprietors of the different dogs reported to have come in contact with the suspected one, were called upon instantly to shoot them, but one and all refused to comply with the request, agreeing, however, to tie them up, and if any one of them should exhibit symptoms of hydrophobia, they should be all shot. What, on a vague report could I have allowed old Pincher to be sacrificed, my faithful attendant for seven long years, my most amusing and sagacious, if I dare not say intellectual companion in many a scene, in his friendship never obtrusive or officious, always sincere, tried in need, and never found wanting, and besides in a merry hour he had gained by his tactics a considerable annuity on his own life to his master. I mention these things not so much for the melancholy pleasure of expatiating upon the virtues of a departed friend, as to show that nothing but "confirmation strong as proofs of holy writ," could have induced me to order Pincher for execution, yet two of the proscribed dogs died within ten days, exhibiting the characteristic symptoms of hydrophobia so clearly, that I was obliged to bribe a man to send a pair of bullets through his head.

Yours,

C.

MUSCULARITY OF BLOOD-VESSELS.

To the Editor of THE LANCET.

SIR,—In reading the accurate report of Dr. Clutterbuck's tenth lecture in your valuable publication, I met with the following passage: "The muscularity of the blood-vessels has been denied also, on the ground of their chemical composition. They have been examined, and found not to contain *fibrine*, which is said to be an essential part of muscle. But this is begging the question? arguments drawn from this source are of little avail; animal chemistry is not sufficiently advanced, to render such a conclusion certain or satisfactory."

It appears to me, Sir, Dr. C. might have effectually refuted this objection of the *chemical* physiologists, by denying, in toto, the correctness of the statement; as Beclard, in an essay entitled, "Recherches et experiences sur les Blessures des arteres," an essay full of ingenious experiments, and displaying at the same time extensive knowledge, although opposed to the idea that arteries possess muscularity, says M. Orfila found *a large proportion* of fibrine in the coats. A fact previously denied by Berzelius and Young.

I am, Sir, yours,

M st respectfully,

E. W

St. Bartholomew's Hospital.

CHARCOAL IN PHAGEDENA.

To the Editor of THE LANCET.

SIR,—In my haste to communicate an important fact which occurred in the course of my practice, I omitted to describe, particularly, the chemical properties of the remedy employed, viz. charcoal in phagedenic ulcers, which a little reflection would have enabled me to do, though, certainly, not with the professional skill or critical talent of your Correspondent "M." of Clapham. I am free to confess, at the same time, that I was not ignorant of its being the base of carbonic acid gas. In recommending the remedy to the notice of my professional brethren, through the medium of your extensive publication, I experienced the pleasurable anticipation that my humble contribution might aid the cause of surgical science, by exciting others to a *practical adoption* of the modus medendi, and, consequently, confirm a fact at present resting on my individual assertion,* I would say, without begging the question, *let the experiment be tried*, and I have no fear of the issue; and, whether the result be the effect of chemical combination, or, simply, the antiseptic and absorbent properties of the remedial mean, is of no importance to the question of the matter of fact; it stands firmly upon its own basis, and therefore needs not any aid to support it; thus inculcating the well-known lesson, which I have not forgotten,

"A good cause requires no advocate,
A bad one, deserves none."

Relying upon your avowed impartiality, I have to request you will give the above a place in the columns of THE LANCET.

I am, Sir,
Your obedient humble servant,
T. W. WANSBROUGH.

Fulham, Jan. 23, 1826.

To the Editor of THE LANCET.

SIR,—Having seen in a late Number of your valuable Journal, a letter from "An Abernethian," respecting the long expected Engraving by Mr. Bromley, after the Portrait by Sir T. Lawrence, and having heard from different individuals (who, like myself, have long ago paid for copies of it) that it was actually ready for delivery two months since, with the exception of its having to undergo a slight examination by Sir Thomas, who was at that time daily expected from Paris, I beg, through your highly respectable Publication, to learn the cause of its being thus detained, or to gain some further information on the subject, as I have long laboured under the unpleasant and too frequent disappointment of its being delayed, and wish, like your former Correspondent, "to decorate my chimney-piece" with the likeness of our very worthy and celebrated Professor.

I am, Sir,
A SUBSCRIBER.

MR. SHAW'S LITHOTOMY CASE.

To the Editor of THE LANCET.

SIR,—In the last Number of your celebrated Journal, I perceived a letter signed "Cacafogo," who declares he is unacquainted with Mr. Shaw and his Lithotomy case; he is, however, desirous of obtaining information upon that subject; for which purpose he is pleased to inform us, that he is of opinion, that every medical man of honour must feel the deepest sympathy for Mr. S., and consequently the said *man of honour must feel* "the utmost detestation of the detestable feelings evinced by the Middlesex Pupil."

From the tenour of these observations, and the manner in which they are expressed, I am inclined to believe that "Cacafogo" is one of those satellites who *adorn* a certain anatomical establishment. In the Institution to which I refer, egotism and falsehood are so ingeniously blended with other branches of education, as to render it impossible for the disciples to suppose themselves fallible. This circumstance will account for the acrimonious insult of "Cacafogo," who is, no doubt, aware that his teachers do not consider an impeachment of veracity derogatory when personally advanced. (vide Physiological Commentaries.)

"Cacafogo," has submitted a series of questions which he imagines, if answered, would oblige the profession. If "Cacafogo" would furnish us with his name and address, I pledge myself to authenticate the statement in question beyond the possibility of doubt. "Cacafogo" has asked what proof have we, that the operation was improperly performed. For this answer I refer him to "Shaw's Manual of Anatomy," and Bell's subsequent work.

I am, Sir,
Yours sincerely,
A PUPIL OF MIDDLESEX HOSPITAL.

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* The practice which Mr. W. recommends is no novelty.—ED.

ROYAL COLLEGE OF SURGEONS IN LONDON.

The Meeting of the Members of this College which was advertised in our two preceding Numbers for Saturday, the 11th inst. is POSTPONED to SATURDAY the 18th instant, when it will POSITIVELY TAKE PLACE. This delay has been found necessary to enable the Barrister to whom the drawing up of the Petition has been entrusted to examine the immense mass of Royal and Parliamentary rubbish, consisting of Charters and Acts of Parliament which have reference to the Surgical Profession. We beg the Members to bear in mind, that our object is to obtain A NEW CHARTER, and any measure short of this cannot accomplish the removal of the numerous grievances of which we complain. Should any individual propose a remedy, having for its professed object a reformation of the College abuses other than *a new Charter*, we shall consider him either an idiot or hypocrite, and we are sure that his proposal would be received by the great body of the profession as an addition to their wrongs, and as an insult to their understanding.

Already has the announcement of this Meeting produced amongst the Surgical Profession throughout all parts of the empire, the most intense and lively interest, and letters are pouring in upon us from many of the larger cities and towns stating that the Members of the College in the various provincial districts will, immediately after the result of the London meeting is known, adopt a similar procedure, and combine with their metropolitan brethren in the laudable attempt to overthrow one of the most disgraceful Institutions in this country,—an Institution which, if liberally and honourably governed, would be productive of far more benefits to mankind than it is possible for the uninitiated to conceive.

MUSEUM AT ST. THOMAS'S HOSPITAL.

Mr. Joseph Henry Green has not yet forwarded to us the letter from Mr. Cline, stating from WHOM that gentleman *received the thousand pounds*, and WHEN he received it. Query, what is the cause of this neglect?

HYDROPHOBIA.

To the Editor of THE LANCET.

SIR,—In Number 122 of THE LANCET are some remarks on hydrophobia by Dr. Marochetti. In describing the symptoms of rabies in the dog, he says, "any attempt to take nourishment is followed by violent convulsions; the mere sight of a liquid gives him inexpressible torture, and he experiences similar suffering if any liquid is thrown on his body."

In Cooper's Surgical Dictionary under the article hydrophobia, the symptoms, as they appear in the dog, are taken from Rees's Cyclopœdia, and amongst others it is stated that, although the disease in the dog is called hydrophobia, it is completely misnamed; "for in *no instance* does there exist any dread of water; on the contrary, dogs in general are very greedy after it; such unfounded supposition has often conduced to a very fatal error; for it being the received opinion that no dog is mad who can lap water, many persons have been lulled into a dangerous security."

I have elsewhere heard from good authority, that rabid dogs are fond of licking polished surfaces, such as fire-irons, fenders, mirrors, &c., the sight of which, in human subjects produces similar effects to that of water.

Now, Sir, although mad dogs are (as I believe) very rare animals, yet it is a point on which it is of some consequence to have correct notions. I therefore beg leave to inquire through the medium of your extensively-read Journal, which of these statements I am to believe.

I am, Sir,
Your obedient Servant,
J. C. JERRARD.

Honiton, 20th Jan. 1826.

HOSPITAL REPORTS.

GUY'S HOSPITAL.

Case of Popliteal Aneurism.

J. L., ætat. 52, a woman of florid complexion, whose general health had always been good, was admitted into the Hospital on Wednesday, January 12, under the care of Mr. Key, on account of a swelling in the left ham.

She stated that the tumour had existed about six weeks, and she did not remember having received any injury to the part. It was about the size of a turkey's egg, very firm and inelastic;

it occupied the whole length of the popliteal space, and extended down between the heads of the gastrocnemius muscle. Pulsation was very distinct in every part of the tumour; on making pressure upon the artery in the thigh, the swelling was reduced, and on removing the pressure, so as to allow of the flow of blood, the swelling quickly reappeared.

It required considerable effort by pressure in the middle of the thigh, to control the circulation through the tumour, from which circumstance, Mr. Key inferred that the artery was unusually distant from the bone. At the time of examination, (which was on the day after her admission) the leg was but slightly œdematous; the patient, however, informed us that the leg usually became much swollen after exertion, and also that on such occasions she felt "shooting pains" in the leg. There is one additional circumstance in the history of this case, which it is proper to mention, because it is generally supposed to be a cause of popliteal aneurism, it is—that the patient had been much accustomed to exertion in walking; her occupation being that of a market-gardener, she was daily in the habit of walking a long distance, and at the same time carrying heavy weights. The nature of the disease being so apparent, Mr. Key explained to the patient the necessity of submitting to an operation in order to effect its cure, and the operation of tying the femoral artery was performed on Wednesday, January 26.

Operation.

The patient being placed in a recumbent position on the table, and the left leg semiflexed, the operator took his seat on the left side of the patient, and after having carefully traced the course of the artery down the inside of the thigh, he commenced by making an incision, upwards of two inches in length, at about one third-way down the thigh. The incision was slightly oblique, and made from below, upwards; the integuments and fascia lata were thus divided, and the inner edge of the sartorius muscle was brought into view; Mr. Key with his finger drew the muscle to the outer side of the wound, and by a careful process of dissection at length arrived at the femoral sheath, into which an opening was made, and the artery separated from its surrounding connexions; this part of the operation was exceedingly tedious. Upwards of ten minutes elapsed before the ligature was passed around the artery, which was accomplished by means of a common aneurismal needle. The ligature was drawn tight, tied, and one of the threads cut off. Mr. Key remarked that the sensation of the giving way of the internal coat of the artery was plainly perceptible to him whilst drawing the ligature tight. The edges of the wound were brought together by means of adhesive plaster, the patient was put to bed, and the limb enveloped in warm flannels; the foot felt cold shortly after the operation.

On the following morning (26th) we found the patient had passed a tolerable night; there was slight febrile excitement; pulse 86; tongue somewhat furred; the limb felt quite warm, and indeed of a higher temperature than the opposite.

27. Has had a comfortable night, and only complains of a tickling cough, for which a demulcent mixture was prescribed; she was also directed to take a dose of aperient mixture.

30th. There is no unfavourable symptom present, as regards the operation; but the bronchial affection is not much relieved. The wound has been dressed; there is a slight blush of inflammation around it; the discharge is of a healthy character.

Cancerous Disease of the Breast.

H. B., ætat. 46, a stout healthy-looking woman, was admitted into the Hospital on the 21st of December, under the care of Mr. Key, on account of disease in the right mamma, of which she gave the following account.

She said, that about eight months ago, her attention was directed to "a dent," or depression, which she observed in the right side of the breast, but that she experienced no pain or inconvenience from it. After a lapse of two months, an ulcer appeared at the point of depression, and on washing this sore, it bled profusely several times, but still it was free from pain.

The opening was on an edge of the outer side of the right mamma, nearly on a level with the anterior fold of the armpit, and concealed by a fold of integument; it was of the size of a shilling, and presented the appearance of an excavation, with the edges somewhat turned *inwards*, a thin discharge issued from it. There was a circumscribed hardness at that part of the breast which was contiguous to the opening. The general mass of the gland was free from any unusual hardness; the nipple, however, was retracted; there was no glandular enlargement in the axilla.

The patient, we omitted to state, is a married woman, has borne several children, and one about three years since;

her catamenial discharge has not yet ceased entirely, recurring at irregular intervals. A curious feature in this case was the absence of pain; she repeatedly asserted that she felt none.

The opinion of Sir Astley Cooper was requested on the case, and he recommended removal of the diseased part, which operation Mr. Key performed on Wednesday, January 25, in the following manner:—two elliptical incisions were made, one above, and the other below the ulcer, which, meeting at their points, included the diseased portion, and it was then dissected out so deeply as to bare the pectoral muscle, to which the enlarged portion of gland was slightly adherent. It was found necessary to secure two arteries, and the patient being faint, she was put to bed with the wound unclosed, under the impression that further hæmorrhage might occur when reaction took place. This did not happen, and the wound was therefore closed with strips of adhesive plaster.

The following singular case (to which we have not ventured to affix a name,) is at the present time in Luke's Ward under the care of Dr. Bright.

The patient is a man of short stature, and dark complexion, and is about twenty-four years of age; he was admitted into the Hospital on December 14, under the care of Mr. B. Cooper, but was subsequently transferred to Dr. Bright.

The patient has been a sailor, and was born in the East Indies; which country, however, he left when about the age of fifteen. At this period he states, that the fingers of both hands, and also his toes, became contracted, and in addition to this they became in some measure devoid of sensation. The contraction and insensibility gradually increased, the latter to such a degree, that he was not conscious of the application of heat; nor indeed could he feel an incision or other hurt. Upon the receipt of any injury, he states that the part turned black, and the finger gradually sloughed away. The result of the frequent repetition of accidents, more especially from burns, is, that the fingers of both hands have now all sloughed away as far as the junction of the first and second phalanges. Nature (as usual in her amputations) has left in each instance, what may be termed a "good stump." The toes, from being less exposed, and consequently less liable to accidents than the fingers, have remained entire, but are contracted, and the ancles are bent inwards. The contraction commenced at the age of 15; it first began in the index finger of the right hand, and gradually extended to the remaining fingers; the sloughing process did not take place until about four years since. The man's general health is good, and his appearance is by no means unhealthy. The pulse at the wrist is feeble, about 80, and perfectly regular; the action of the heart is very feeble, it has a kind of *diffused* faint beat; when we say diffused, we mean that it is beating over a large surface. Dr. Bright infers from the application of the stethoscope, that there is a thinning of the parietes of the heart. Of course in such an anomalous case, but little can be done, more especially, as the sloughing process appears to have staid, and the general health is not impaired. A seton has been passed through the integuments of the chest, and the bowels kept regularly open.

ST. THOMAS'S HOSPITAL.

Acute Peritoneal Inflammation following the excision of venereal warts and enlarged nymphæ.

It is a fact somewhat curious that in the female foul ward of this Hospital, three cases have lately occurred in which symptoms of acute peritoneal inflammation were manifested on the day after operations on the genitals. The removal of venereal warts in one case, a patient of Mr. Green; the excision of warts with enlarged nymphæ, in a second case under the care of Mr. Tyrrell; and the removal of enlarged nymphæ alone in a third case, which was also under the care of Mr. Tyrrell. The symptoms were highly alarming, and required the most active and energetic treatment in order to subdue them; large and repeated bloodlettings, with the exhibition of calomel until ptyalism was produced, the application of leeches and blisters to the abdomen were the principal means employed. It is right to observe that each of the patients thus attacked, had imprudently eaten sour oranges, which produced much griping previous to the full developement of the peritoneal inflammation.

Case of Fungoid Disease of the Eye.

R. R., ætat. 23, a married woman, of spare habit with an infant at her breast, was admitted into the Hospital on Thursday January 12th, under the care of Mr. Green, on account of disease of the left eye.

On examination the whole globe of the eye was found to be considerably enlarged and protruding from the orbit, and the eye-lids were widely separated. The transparent cornea had an unusual projection, and was of a brownish colour, bearing at the same time a dead sloughy appearance, the marginal line formed by the anterior part of the tunica-sclerotica was well defined, its pearly appearance being completely destroyed and in addition to these there was excessive chemosis of the tunica-conjunctiva, covering the eye-ball. The patient gave the following history of the disease :

About five years since, and previous to her marriage, she was suddenly seized in the night with violent pain in the left eye extending to the temple, and at the same time vomiting came on. In the morning the eye was very much swollen and inflamed, and she had recourse to professional advice. Leeches were applied and various other measures adopted, among which may be mentioned the exhibition of mercury until profuse ptyalism was induced ; about the fifth day she imagined an opening was made into the eye by the surgeon in attendance, but of this she is not certain. The eye continued bad for nearly two months, at the expiration of which time she found that vision was completely gone, and indeed, to use her own expression, " the eye was sunk into the head." This account, coming from the patient is of course exceedingly imperfect, and all that can be inferred from her description is that she had an attack of acute inflammation in the eye, which proceeded to the destruction of the organ.

The patient further stated that subsequently to the entire loss of vision she remained quite free from pain in the eye, until about six weeks since, when she was brought to bed on board of a ship, and during the time of her confinement she was from various circumstances exposed to the influence of damp and cold ; the eye now began to swell and she felt much pain therein, and the swelling went on gradually increasing up to the time of her admission. Her general health she said was good, and upon minute inquiry there did not appear to be reason to suspect any visceral disease, and there was no glandular enlargement perceptible in any part of the body. The pain which she felt was of an acute darting kind, principally about the lower part of the forehead, superciliary ridge, and temple, she also referred to a point on the left ala nasi, at which she said the pain often commenced, there was in addition a shooting pain at the back of the head.

A few days after her admission, the cornea gave way, and an ichorous discharge issued from the opening, she expressed some relief from pain and a sense which before prevailed. The remaining cornea assumed a black appearance, and hung down in shreds from the eye, the general size of the swelling increased, and the upper lid had become more pushed up, and on pressure there was a distinct round tumour to be felt under it, and apparently intimately connected with it.

Such being the rapid progress of the disease, Mr. Green requested the opinion of his colleagues on the case, both of whom saw it, and we believe considered it to be a well-marked case of fungoid disease of the eye ; they recommended the operation of extirpation, as affording the only possible chance to the patient. It is right, however, to observe, that Mr. Green had previously pronounced a similar opinion, and in arriving at a determination to operate, he was influenced by the consideration of the general good health of the patient, the absence of any glandular swelling, strengthened still further by an opinion that the disease itself was not beyond the reach of the knife. The poor woman having consented to the performance of this painful and formidable operation, it was completed by Mr. Green on Friday, January 27, in a manner which reflects high credit on him as an operating surgeon.

Extirpation of the Eye.

The mode of performing this operation was as follows :—The patient was placed in a recumbent posture, with the head slightly elevated, the operator being stationed on the left side of the patient. The first step in the operation consisted in dividing the eye-lids at the external canthus, and this was effected by means of a transverse incision, extending a short distance beyond the edge of the orbit ; next a perpendicular incision was made at the inner canthus : this commenced at the edge of the upper lid, and terminated at the superciliary ridge. An assistant now held back the upper lid, thus freed, by means of a hook, and an opportunity was afforded of examining the small tumour, which had occasioned the projection of the lid ; it was found merely to be a part of the fungous mass projecting at this point, and not a distinct tubercle attached to the lid, as was supposed.. A curved needle, armed with a ligature, was now passed through the globe of the eye ; perforating the sclerotic coat, and the ends of the ligature being held tight by an assistant, the eye was thus rendered steady. Mr. Green now took a long double-edged straight scalpel, and passed it deeply

backward at the inner canthus, just above the carnucula lachrymalis, and passing it around the orbit, successively divided the conjunctiva, cellular membrane, and oblique muscles, and the eye was now seen to be very moveable. The operator then passed his scalpel backward, along the outer edge of the orbit, and divided the straight muscles and optic nerve, by which means the operation was completed. There was considerable hæmorrhage from the vessels, when Mr. Tyrrell passed his finger into the orbit, and made pressure for the space of a few minutes, which was sufficient to stay the bleeding. The lids were now brought in apposition; a compress of wetted linen applied over them, supported by a roller gently passed round the head.

Mr. Green, in offering some observations to the pupils on this case, remarked, that his reason for not employing dossils of lint to suppress the hæmorrhage, arose from the circumstance of being informed by his colleague Mr. Tyrrell, that in a case on which he had operated, pressure by the finger was found to control effectually the bleeding. The advantages of such a plan over the usual mode of cramming the orbit with dossils of lint, he said, were apparent, when we consider that such bodies in the orbit must of necessity produce a certain degree of irritation, which is carefully to be guarded against, as from the proximity of the membranes of the brain, and their ready disposition to take on inflammation, such an event was to be dreaded. Mr. Green also remarked, that he found no difficulty in performing the operation with a straight scalpel, instead of the curved knife generally used.

The report of the state of the patient on the day following the operation, was, that she had had some sleep during the night, was tolerably free from pain, and the pulse very little accelerated; she had, however, vomited during the preceding evening.

ST. BARTHOLOMEW'S HOSPITAL.

Case of Strangulated Femoral Hernia.

Thomas Robertson, a man apparently about 30 years of age, was brought to the Hospital on the afternoon of Monday the 24th, a little after four o'clock, labouring under a strangulated femoral hernia of the left side, which had been down since the preceding Thursday. It appeared that for some years past he has had a reducible hernia on this side, but from which he was not much inconvenienced excepting once, when he was unable to return it and he in consequence sent for a surgeon, who effected its reduction. On Thursday week it again descended, and the man, being unable to reduce it himself, sent for a neighbouring surgeon, who had recourse to the usual measures resorted to in these cases; the man was bled, pounded ice was applied over the tumour, and a tobacco enema was subsequently administered, in conjunction with the application of the taxis. These means, however, failed in effecting its reduction, and an operation was accordingly proposed to the man, but he obstinately refused. No very urgent symptoms appeared to present themselves up to the Monday, indeed we could not learn that there were any other symptoms present before this time, than what might be fairly referrible to a mere irreducible hernia; the bowels, certainly, had not been relieved since the Thursday. On the Monday, however, evident symptoms of strangulation presented themselves; the man complained of great pain in the abdomen, for the most part in the neighbourhood of the inguinal canal, accompanied with violent sickness and vomiting of stercoraceous matter. Becoming alarmed at his situation, he at last consented to have the operation performed, and he was in consequence sent to the Hospital. The use of the taxis was persisted in by the house surgeon for a short time, but finding it ineffectual, Mr. Earle was sent for. He arrived at a little after six o'clock, at which time violent sickness had again recurred, and after learning the previous history of the case he deemed it prudent immediately to perform

The Operation.

The tumour, previous to dividing the parts, was about the size of an egg. On dissecting back the usual triangular flap of integuments and fascia superficialis, and thus bringing into view the fascia propria, it was found to have a very peculiar appearance; very thin in some places, thick and condensed in others, with portions of adeps intervening. On cutting into the sac it was found to be principally filled by a large tubercle, included within an adventitious membrane, and very much resembling in appearance an hydatid. On opening this tubercle it was found to contain a transparent jelly-like kind of secretion, very much resembling the vitreous humour of the eye. This being removed, a small knuckle of intestine was discovered beneath it; the intestine did not present an unhealthy appearance with the exception of being a little congested. The seat of stricture

was next sought for, when it was found to be at the neck of the sac. This was divided by the operator, and the intestine returned. Scarcely however, had the reduction been effected than an effusion of matter and air took place from the cavity of the abdomen, and which, from its feculent odour, left no doubt as to its being discharged from the intestine. Mr. Earle of course felt not a little chagrined at this occurrence, but as nothing further could be done, the man was ordered to bed. Several emollient enemas were subsequently administered, but without producing the desired effect, and about an hour and half after the operation vomiting again recurred. A powder containing four grains of calomel and eight grains of jalap was given, and this was followed up by the administration of small and frequent doses of sulphate of magnesia. Topical fomentations were also kept applied in conjunction with the foregoing medicines.

Mr. Earle arrived at the Hospital at 12, and immediately visited the patient. At this time the radial pulse was quite imperceptible, and the countenance exsanguineous. Still, however, there did not appear to be a great deficiency of muscular power, for just at this moment the bowels again acted, and he was quite capable of raising himself in bed while the bed-pan was under him.

From the sinking state in which Mr. Earle found the patient, he was induced immediately to direct that an egg should be beat up with some brandy; a dessert spoonful of which should be given instantly, and repeated at intervals; at the same time carefully watching its effects. Within a few minutes, however, after Mr. Earle had left the Ward, word was brought him that the man was dead.

Inspectio Cadaveris.

Towards the latter part of the day, the body was examined, but from the *snug and peculiar way in which the thing was managed*, very few were present. We happened, however, fortunately, to be passing the *Operating Theatre* at the time, and so "dropped in." The lower portion of the ileum was the part which was found to have protruded, and in the line of stricture, or rather a little above it, "a pin-hole aperture" was discovered in the intestine, which was occasioned by the sloughing of a small gangrenous spot, and through this "pin-hole aperture," the feculent discharge before mentioned had proceeded. Some further discharge had subsequently occurred through it into the cavity of the abdomen, and this *perhaps* satisfactorily accounted for the extensive peritoneal inflammation which was found to have existed. The symptoms, however, previous to death, did not lead to the supposition that such an extensive inflammation had taken place. On the right side were found the remains of an old hernial sac.

A Child bit by a Dog supposed to be rabid.

A little girl, about seven years of age, was brought to the Hospital, by its anxious parents, on Monday the 24th, having two scars on the anterior part of the right leg, which had been occasioned by their own dog biting her. About a fortnight previously, the dog had shown a peculiarity of manner: he loathed his food; howled at night; and appeared cunning and sly. The child's father stated that he believed the dog had some time before been bitten by another dog which was supposed to be mad, and that the child was sitting quietly at the breakfast-table, when he flew at her, and inflicted the present wounds. The mother was absent from home at the time, but some neighbours came in, who had the dog chained up, and on the next day he was shot.

It being Mr. Abernethy's accident week, the child was admitted under him, and Mr. Earle, who happened to be at the Hospital at the time, saw her in consequence. From the description which the parents gave, he considered it the safest plan to have the parts freely excised, which was accordingly done. On the Wednesday following, Mr. Abernethy saw the child, and on hearing the history of the case, and the measures which had been adopted, approved of them; and, in conclusion, remarked, that in the numerous cases which had fallen under his care, not one had proved fatal when this plan of treatment had been adopted before any constitutional symptoms had manifested themselves; notwithstanding the dogs had been in some cases unquestionably rabid. It is more for the purpose of recording this gentleman's experience than any thing else that we notice this case.

Mr. Stanley, on Monday morning last, informed the students in a round-about speech, which occupied nearly ten minutes in delivery, (but which might have been embodied in about a dozen words,) that their petition had been presented by him to the surgeons, and had met with their entire concurrence. Orders had consequently been issued for its being carried into immediate execution.